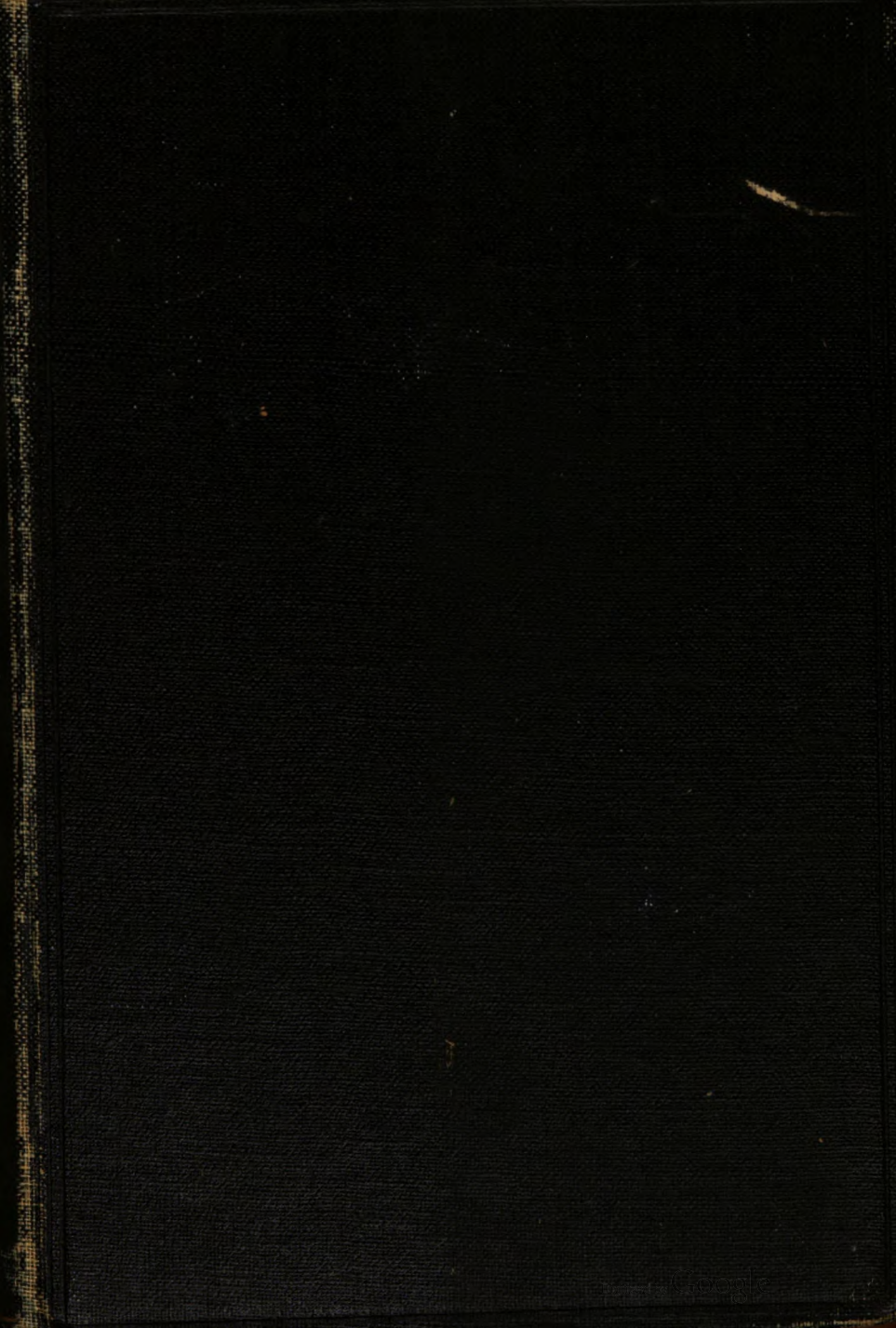

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haec, praecon, indigne
captas, mi parva ^{munus}
Valde dilectae donec
Olim tibi



1538



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A HANDBOOK OF GREECE

VOLUME II. PART 1

THE CYCLADES

AND

NORTHERN SPORADES

June 1919

NAVAL STAFF

INTELLIGENCE DIVISION

DF717

.G75

1919

Vol. 2, pt. 1-2



NOTE

VOLUME II of the *Handbook of Greece* deals with the Aegean and Ionian islands—Part 1 with the Cyclades and Northern Sporades; Part 2 with the islands of the northern and eastern Aegean; Part 3 with Crete; and Part 4 with the Ionian Islands.¹

For the purposes of Volume II a knowledge of Chapters II–XII of Volume I (i.e. general information concerning Greece as a whole) is assumed, but specific reference to Volume I has sometimes been made, and for convenience some sections of that volume are included, with alterations where necessary, in Volume II. Thus the tables for the climate have been reprinted under that head in the general surveys of the Cyclades and Northern Sporades; part of the sections on money, weights and measures, and calendar have been incorporated; and the glossary on p. 220 is adapted from that on p. 193 of Volume I.

Large-scale maps of individual islands exist: these are mostly of local Greek production and are generally inaccurate, though useful for place-names. Better maps occur in scientific treatises on special islands, but these are mostly difficult of access. The Admiralty Charts are useful for the coasts, but they are not generally drawn or divided into sheets with a view to showing groups and interiors. The best maps are those of Philippon—one of the Cyclades and one of the Northern Sporades, scale 1 : 300,000, published in 1901. The form-lines and colouring of these maps give a fairly accurate general impression of the surfaces, and the topography and nomenclature are also fairly sound.

The same system of transliteration has been adopted as in Volume I (see Vol. I, p. 195), and the modern Greek forms of

¹ Part 4 has not yet (1919) been issued.

NOTE

place-names have been kept except in the case of *Syra*, *Cyclades*, *Sporades*, and other familiar anglicized words.

In the detailed description of the islands complete uniformity in the scheme of subdivision has not been attempted. As the islands vary greatly the matter has been arranged as in each case seemed best, though a general order of treatment has been preserved.

The term *road* has been used for metalled ways; *track* indifferently of both cart-tracks and mule-paths, as the distinction between these two in these islands is negligible.

Acknowledgements are due to Messrs. A. Constable & Co. for permission to use an illustration.

Definite information upon certain points touched on in this volume has not been available, and the Admiralty will welcome additions and corrections.

Abbreviations

C.H. = Custom House. P. T. O. = Post and Telegraph (or Telephone) Office. C. = Consul. V. C. = Vice-consul. C. A. = Consular Agent.

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SECTION I. THE CYCLADES

GENERAL SURVEY

Physical features—Geology—Flora and fauna—Climate—History—Race—Settlement—Social characteristics—General economic conditions—Agriculture and kindred pursuits—Mining—Fishing and minor industries—Trade and commerce—Shipping—Harbours—Communications—Areas and population—Administration and representation—Foreign representatives—Money—Weights and measures—Calendar.

OF all the islands of the Aegean and Ionian Seas the Cyclades are the most characteristically Greek. Physically and economically closely related to the adjacent mainland, they have at certain periods and in certain respects maintained racial and cultural features more purely Greek than even Attica, Boeotia, and the Peloponnese, while as regards their political allegiance there has been in modern times no real question.

PHYSICAL FEATURES

The name *Cyclades*, in ancient times applied to those islands which were supposed to lie in a circle around Délos, now denotes a roughly oblong group forming a south-eastern extension of Attica and Euboea. This oblong, whose length (north-west to south-east) is about 110 miles and average breadth (north-east to south-west) about 60 miles, comprises twenty-three islands with an area of more than nine square miles besides numerous islets and rocks, and has a total superficial area of about 1,050 square miles. It is bounded on the north-east and south-west by two fairly clear lines of islands (Ándros to Amorgós on the north-east and Kéos to Théra on the south-west); there are several islands (Gióúra to Anáphe) lying along a central line and one or two (e. g. Mélos) irregularly placed.

The barren rock-bound flat-topped appearance of many of these islands indicates pretty clearly their origin. They are the fragments of an ancient upland whose surface has been worn by long weathering into rough undulations or, where the rocks were of a more resistant character, into sharp clear profiles, the former type being by far the more common. By a series of fractures and subsidences this upland, along with its developed stream and coastal-plain system, has been all but submerged, and only the highest levels remain above the sea. Thus there are few large alluvial plains corresponding to those of the mainland, and the present streams and valleys, being but the upper sections of the original forms, are usually clear-cut and small. So too the bays, where the sea has occupied former river-mouths and valleys, are deep and jagged and lead down to a submarine platform which marks the ancient coast-line, while the action of the waves on more exposed flanks or where the high ground lay nearer to the coast has carved out remarkably straight and precipitous coast-lines, and in general there is a marked absence of sandy beaches.

With one or two exceptions therefore the Cyclades with their rough, elevated, and even mountainous interior, their rocky valleys, their steep, closed, and at times precipitous coasts have an inhospitable and inaccessible aspect, which is heightened by their prevailing barrenness and by an atmospheric clearness which reveals their every detail. Yet this appearance is largely deceptive. The coasts abound in coves and inlets; the larger bays, where the sea has occupied sunken valleys, supply numerous deep and sheltered harbours, several of which are as good as any in the Mediterranean. At the heads of these bays and at the outlets of most streams are fertile if small and sometimes marshy plains, and the well-weathered inland surfaces give opportunity for a good deal of unexpected cultivation.

The water-supply, though not abundant, is in most islands sufficient. In Ándros and Náxos alone are there one or two streams of constant flow; the streams marked on maps are generally dry torrent-beds. Springs with good fresh water

are, however, plentiful and exist, especially in schist regions, at high elevations (e. g. the spring Kryonéri in Ándros, alt. over 3,000 ft.). In dry parts windmills are employed, and they are a common sight on the rocky island ridges, and in the valleys wells and sometimes water-wheels abound. Some islands have to rely largely on rain-water, which is caught in cisterns. Ándros is the best-watered island, Kýthnos, Kímolos and Théra the worst. In Théra, when rain-water fails, water has to be imported from other islands.

GEOLOGY

The geological features are naturally confused and interrupted, and the connexion with the neighbouring mainland formations is by no means clear. Several main characteristics can be traced, notably : crystalline formations (the schists—prevalingly mica schists—of the northern and the gneisses of the central Cyclades, both interlaid with granite and marble in varying degrees and qualities) ; early sedimentary rocks of the south-western islands ; and the later formations of Páros, Mélos and some other parts. Lastly volcanic formations and agencies (e. g. earthquakes), though not infrequent throughout the Cyclades, come especially to the fore in the Mélos and Théra groups, and the latter with its ring-like formation, large central basin, andesite and tufa composition, hot springs, and extensive beaches of black volcanic sand is a notable exception to the prevailing Cyclades type. The mineral resources, which are of importance, will be dealt with under 'Mining' (see p. 31).

FLORA AND FAUNA

The bareness of the Cyclades is due to causes partly natural and partly artificial. Their nature and composition are not such as to produce or maintain sturdy forests, and few of the ordinary mainland trees (e. g. pines) flourish. Further the hills have been relentlessly denuded of wood and even of scrub for firewood and charcoal ; there is no system of re-planting, and goats eat off young trees. The earth from the

uplands is mostly washed down by the torrential rains into the sea, only a small part finding its way to the plains. The rocky heights and hill-sides thus support only junipers, phrygana, and other scrub, and large tracts are quite bare. Oleanders and rushes are sometimes found in the valleys, and lentisks are common. Spring sees the hill-sides clothed with numerous beautiful flowers, grasses, and thistles, but these wither in early summer. There are no wild forests; in Náxos alone are there traces of former oak woods, and Kéos is noted for its valonia oaks, which, however, are here trees of cultivation and commerce. Date-palms have been planted near the towns in many islands, but their fruit does not ripen, and cypresses grow in Ándros, Théra, and some other islands.

Wild animal life is equally scanty. Some of the deserted rocks (e.g. Eremómelos) are said to have wild goats upon them, and rabbits and hares are plentiful. Several islands, particularly Kýthnos and Anáphe, abound in red-legged partridges, and on the latter are wild pigeons. Quails settle upon the southern islands in enormous numbers in their migration south and are hunted with nets and guns. Small reptiles, some very poisonous, are fairly common, Páros and Ténos particularly being notorious for their poison-snakes. In most island waters fish are caught in moderate quantities, and the small octopus of these coasts is a favourite article of food.

CLIMATE

(The following account is based mainly upon the chapter on 'Climate' in Vol. I of this handbook, and the tables for temperature, rainfall, and humidity there given (pp. 41–51) for the Cyclades have been reprinted below. But for purposes of comparison the complete tables in Vol. I should be consulted.)

The climate of the Cyclades is naturally more equable than that of the mainland, while the more remote from the mainland the more equable as a rule is an island's climate (cf. Théra and Ándros in this respect). There is thus a general absence of strong contrasts in temperatures, the only considerable

exception being the valleys in some islands (Náxos, Syra, Ándros, &c.). These valleys are usually cold in winter, but hot and close in summer, when the difference in temperature between them and the exposed heights surrounding is most marked. The coolness and freshness of some islands (e.g. Ándros, with its valleys facing the north-east winds) cause them to be used as summer resorts.

The equability of climate is to some extent due to the prevailing winds, which in winter, though variable, blow chiefly from the south-west, bringing warmth and rain, while in summer for long stretches at a time the islands are exposed to north-east gales. These latter are exceedingly fierce, especially in the mornings and on the heights, where they prevent the growth of vegetation and even the movement of men and animals. They sometimes interrupt intercourse between the islands for days together and sweeping down over steep coasts are a constant source of danger to coastwise shipping.

The annual rainfall is about 18 in. It is subject to greater variations than that of the mainland, and within the Cyclades the southern are much drier than the northern islands. Thus while the December and January rainfall of Ándros and Syra is greater than that of Athens and Nauplia, the July-September rainfall of all the Cyclades, and particularly of the southern islands, is much lower. Rain, when it does occur, usually falls heavily and is often torrential.

In respect of humidity also conditions are moderated in some cases by the prevalence of mists which clothe the heights (especially in Ándros, Ténos, Kéos, but also in Théra) in summer and winter, and by the heavy summer dews which occur in the southern islands. Occasionally sleet and snow fall in winter, but the latter never lies for more than a few days even upon the highest parts of Náxos and Ándros, and frosts are rare. Thunderstorms, though infrequent, are accompanied by torrential rain.

In respect of climate also Théra is somewhat exceptional: there is practically no summer rainfall; frosts occur; and the air is extremely moist (cf. in this latter respect Síkinos).

TABLES

The position of the meteorological stations is as follows :

Ándros :	altitude	154 ft. ;	latitude	37° 47' N. ;	longitude	24° 45' E.
Syra :	"	1,073 "	"	37° 29' N. ;	"	24° 56' E.
Náxos :	"	16 "	"	37° 6' N. ;	"	25° 23' E.
Théra :	"	745 "	"	36° 25' N. ;	"	25° 30' E.

MEAN TEMPERATURE

(in degrees Fahrenheit) —

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Ándros	.	.	51	53	55	60	69	76
Syra	.	.	53	54	56	61	70	77
Náxos	.	.	55	55	57	62	68	74·5
Théra	.	.	51	53	55	60	65	72
<i>Mean</i>	.	.	52·5	53·8	55·8	60·8	68·0	74·9

MEAN MONTHLY MAXIMUM TEMPERATURE

(in degrees Fahrenheit)

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Ándros	.	.	63·9	66·6	69·8	77·2	86·9	91·8
Syra	.	.	63·5	66·7	69·6	76·6	84·9	92·1
Náxos	.	.	65·3	67·1	70·9	77·2	84·0	89·2
Théra	.	.	61·9	64·0	67·5	74·5	82·6	87·4
<i>Mean</i>	.	.	63·6	66·1	69·4	76·4	84·6	90·1

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
80	79.5	77	68	59	54	Ándros.
81	80	75	69	60	56	Syra.
77.5	77.5	74	69	62	57	Náxos.
76.5	76.5	72	67	59	54	Théra.
78.7	78.4	74.5	68.2	60	55.2	<i>Mean.</i>

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
94.5	97.0	90.0	88.3	73.9	67.6	Ándros.
94.6	96.1	90.5	83.7	74.1	68.7	Syra.
88.9	90.0	86.7	82.4	74.7	68.4	Náxos.
89.2	91.0	85.1	81.0	71.8	63.1	Théra.
91.8	93.5	88.1	83.8	73.6	66.9	<i>Mean.</i>

MEAN MONTHLY MINIMUM TEMPERATURE

(in degrees Fahrenheit)

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Andros	.	.	35	37	39	46	52	59
Syra	.	.	39	40	42	47	56	63·5
Náxos	.	.	40	42	44	48	55	62
Théra	.	.	38	38	40	46	53	60
<i>Mean</i>	.	.	38	39·2	41·2	46·8	54	61·1

MEAN MONTHLY RAINFALL

(in inches)

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Andros	.	.	5·20	3·94	3·11	1·18	0·91	0·63
Syra	.	.	3·86	2·60	2·32	1·10	0·94	0·35
Náxos	.	.	2·84	2·52	1·46	0·91	0·78	0·12
Théra	.	.	2·56	1·73	1·38	0·83	0·75	0·04
<i>Mean</i>	.	.	3·61	2·70	2·07	1·00	0·84	0·28

RELATIVE HUMIDITY

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Andros	.	.	74	73	71·7	68·2	64	62·4
Syra	.	.	71	70	68·5	66·5	63·4	60·7
Náxos	.	.	74·7	74·4	71·7	70·7	70·7	68·9
Théra	.	.	72·3	71·7	70·7	70·6	69·6	65·4
<i>Mean</i>	.	.	73	72·3	70·6	69	66·9	64·4

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
66	66	60	54	42	38	Ándros.
69	69	62	58	47	40	Syra.
67	69	62	58·5	48	44	Náxos.
66	67	61	55	46	41	Théra.
67	67·8	61·2	56·4	45·8	40·8	<i>Mean.</i>

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
0·08	0·16	0·63	1·73	3·15	5·20	Ándros.
0·20	0·51	0·83	1·69	3·15	3·54	Syra.
0·04	0·08	0·39	1·04	2·01	2·87	Náxos.
0·04	—	0·43	0·91	2·52	3·03	Théra.
0·09	0·19	0·57	1·34	2·71	3·66	<i>Mean.</i>

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
59·7	60	63·2	70·1	74·9	76·7	Ándros.
53·2	57	63·6	71·8	76	75·2	Syra.
71·1	73·9	73	75·3	74·3	76	Náxos.
60·4	62·1	68·2	72·5	73·7	74·6	Théra.
61·1	63·2	67	72·4	74·7	75·6	<i>Mean.</i>

HISTORY

The story of the Cyclades is marked by unusual vicissitudes. This they owe not so much to their intrinsic value as to their insular character and their position—detached from and yet associated with the surrounding mainlands—and the fluctuations of their politics and trade.

Important in earliest times as the last link between the heart of Greece and the old civilizations of the East, they were the home of the most ancient culture known as Greek, and essentially Greek they have remained through the centuries of endlessly changing domination. Better known and of greater importance in the classical world than in the modern, they contained in Délos one of the religious centres of Hellenism. Through a series of hands they fell to the Romans, under whose empire Délos again momentarily awokē, this time as a great slave-market and emporium for the Roman north-eastern trade, while other islands (e. g. Gioura and Amorgós) were used as places of banishment. Lost to view in the Dark Ages—they apparently suffered no Slavonic invasion—the Cyclades reappear after the Latin victory over the Byzantine (Greek) Empire marked by the fall of Constantinople (A.D. 1204).

In accordance with the licence granted by the Venetian Government to their nobility, the Cyclades were seized by various Venetian and Genoese adventurers, who built up for themselves some twenty more or less independent island duchies and dynasties, the chief of which were those of the Ghisi in the north and the Sanudi in the central Cyclades. These dynasties were semi-feudal in character, were based mainly upon the economic wealth of the islands, and were supported by considerable military and social force. Numerous fortresses and strong places found on harbours or hills throughout the Aegean were the work of these 'Frankish' lords. Under them the islanders remained agriculturists, sea-trade being a monopoly of their rulers, who, though well hated, preserved some degree of peace and external security, while the mainland was devastated by ceaseless wars. So the Turks

on their advent found here a submissive and industrious population, and the islands were spared the worse features of Turkish rule.

Most of these island dynasties succumbed to the Turks after the fall of Constantinople (1453), but some held out longer—Náxos till after 1550, Ténos till 1718. The Turks troubled the Cyclades little: an official upon a vessel anchoring in Páros harbour collected a yearly tax, and if this levy was paid (and it was not burdensome) the islanders as a rule heard nothing more of their rulers. The succeeding centuries (seventeenth and eighteenth), though they witnessed the final struggle between the Venetian and Turkish powers and the confusion, lawlessness, and wandering consequent upon them, were nevertheless in these islands the germinating time of liberty. The lands passed mostly into the hands of the peasants, and the sea was thrown open to trade—and piracy. Piracy, which lasted with fluctuations down to the middle of the nineteenth century and yielded finally only to steam, laid the foundations of Greek sea-power. The island seamen were conscripted for the Turkish navy and were the sea-merchants of the Turkish Empire. In the War of Independence these seamen won her naval battles for Greece and formed the basis of the Greek mercantile marine. The Greek merchant princes of to-day are the historic descendants of the daring freebooters and adventurers who even now are found plying with their caïques as free-lance traders and smugglers through all the coasts of the Levant and the Aegean.

To piracy and its effects must be attributed the numerous strong refuges and watch-towers scattered in fertile parts or near mines throughout the islands, while to this period belong the general abandonment of old coastal sites and the concentration into strong centres in inland and often inaccessible positions. So too in these years, as later in the struggle for freedom, many refugees from Turkish oppression in Crete and Asia Minor found a home in the Cyclades, and it was then that Ténos, with its settled government, received such a large access of population.

The opening of the seas and the development of island resources stimulated shipbuilding; ships encouraged trade and opened markets for island products. The eighteenth century saw the opening up of the Russian Black Sea trade for the Greeks and the corresponding development of wine production in the islands, though it is true that this affected the Cyclades less than some islands (notably those off the Asiatic coast) possessed of greater resources. In 1770, in consequence of the war between Russia and Turkey, eighteen of the Cyclades were annexed by the former, only to be ceded again to Turkey in 1774.

In the War of Independence the Cyclades as a whole played their part. But some of them (Théra, Ándros, Ténos, and Syra), partly owing to the lightness of the Turkish yoke, at first refused to join the movement, and this earned for the islanders as a whole a name for timidity amongst mainland Greeks which clings to them to this day. In the treaty of 1832 the Cyclades were incorporated in the newly formed kingdom. During the war and throughout the following century of Greek liberty the famous shrine of the Evangelistria in Ténos (founded 1822) with its thousands of pilgrims from the whole of the Greek world (including Crete and the Asiatic islands) played an important part as a rallying point and centre for the dissemination of Hellenism, and, whether consciously designed for this purpose or not by the patriotic Greek Orthodox clergy, it forms a remarkable parallel to the ancient shrine of Délos. A similar patriotic rôle was played by the once famous school of Síphnos, also conducted by the clergy, where numerous young Greeks found inspiration and revolutionary zeal. Having played its part in the achievement of freedom, it fell after 1830, like so many other patriotic institutions, into undeserved oblivion and decay. Theóphilos Kaíres, a hero of the revolution, was a native of Ándros and is a type of the new island patriot, in whom local and national patriotism are reconciled. It was during the War of Independence that refugees from Chíos, Psará, and other Asiatic islands founded the modern town of Syra, the island at that time being under

French protection. Thence date its commercial prosperity and greatness. The rise of Syra symbolizes the realization of Hellenism for the Cyclades, as its decline upon the growth of Piraeus symbolizes their final absorption into the wider Greek nationhood. Every year since the declaration of independence has witnessed a closer organic unity between these islands and mainland Greece, as every year sees their more complete participation in modern European life.

RACE

Geographical and historical causes have preserved in the Cyclades a fairly pure Greek type. Removed from the main continental movements, they seem to have suffered no Slavonic invasion, while the Albanians, though they penetrated Ándros, are confined to the northern half of that island. The extent of the 'Frankish' element (Venetian, Genoese, and a few Spanish families, e.g. in Théra) is uncertain, but except in Ténos, and to a less degree in Syra, Théra, and Náxos, it appears not to have been great. In any case it was almost certainly confined to the towns and coastal districts and is now completely absorbed. The Turkish element in the Cyclades is negligible. On the other hand many of these islands received at various times accessions from other parts of the Greek world (e.g. Crete, islands off the Asiatic coast, &c.) whose very character as refugees is a presumption in favour of their Greek nationality. Thus Syra was colonized by Chians and other Greeks from the Asiatic side, and the emery-miners (Apeiranthiots) of Náxos are of a distinct type and reputedly of Cretan origin. The islanders are a medium-sized dark-haired people, often handsome and well built, and are seen to best advantage as sailors.

The conditions prevailing in the islands are generally healthy, for, though little has been done in the way of drainage and sanitation, most villages and some of the towns are built on hill-slopes and in sites naturally favourable. On the other hand the lowland plains are sometimes marshy and malarious, and Mélos, Kímolos, and Kýthnos have been visited by

frequent pestilences. The inhabitants of other places (e. g. Kéos, northern Ándros, Síkinos) suffer much from the dampness of the air (see above, p. 13), while town-dwellers (e. g. Syra) and the dwellers on more isolated islands often show signs of inbreeding and insanitary conditions, and amongst these consumption and many evidences of degeneration are visible.

SETTLEMENT

The modes of settlement vary considerably, but in general they reflect clearly the local geographical and historical circumstances. The islands are in a transition stage—now nearly completed—of reversion to scattered settlements after the crowding together of the troubled Middle Ages. Most islands have a capital, usually called by the name of the island, or more simply Chóra. In the more important islands this is on the coast and usually on the best harbour, but in less favoured islands the capital still occupies secure heights inland and is more in the nature of a fortress. In the larger islands again there are numerous villages of varying size, sometimes larger and finer than the capital (e. g. Apeíranthos in Náxos), while in smaller islands the capital is often the only settlement. In one or two cases the island is being repopulated from the capital, and the temporary cultivation huts are being converted into permanent dwellings, and hamlets are arising (e. g. in Kéos and Pholégandros).

Numerous monasteries, large and small, are found in most islands, often occupying remote and commanding sites.

The island towns are interesting and attractive by reason of the quaintness and diversity of their sites and structure and the remains of antiquity (castles, towers, walls, gates, &c.). No two are alike, and yet in general they differ sharply from mainland towns and villages. Except in Ándros scattered villages are unknown: even small places are built townwise and sometimes in the form of strongholds. The streets are narrow, crooked, and often vaulted over; they are usually stone-paved, in part or altogether, and where, as often, the town occupies a hill-side they become a series of steps and, in

winter, cascades. Sanitation hardly exists, and most villages are filthy—pigs, poultry, dogs, and cats roaming freely in the streets and houses. Good building-stone is plentiful, and the Cyclades houses are usually large, square, and well built, whitewashed or coloured in pale tints outside and in; they have balconies, Venetian shutters, and flat roofs, often used for water-catchment. In hill-side towns the houses crowd box-like upon each other, in Kéa the roofs of the lower serving as footpaths for those above. The absence of wood is a severe handicap, and in Théra the houses have vaulted roofs composed of volcanic cement, while many Therans have to live in dwellings hewn out of the volcanic tufa. Churches are a conspicuous feature of most islands and are often large and fine; the shops are generally small and mean, and hotels are found only in the largest places (Syra, Ándros, Ténos, Náxos, Théra) and are poor.

SOCIAL CHARACTERISTICS

The islanders speak a Greek not distinguishable in essentials from that of the neighbouring mainland (Attica, &c.). (For general remarks on the modern Greek language see Vol. I, Chap. VI, and also p. 194 in that volume.) French is mostly understood in business and educated circles.

The Greek Orthodox is the prevailing religion. Roman Catholicism, a legacy of the 'Frankish' occupation, survives only in Syra, Ténos, Théra, and Náxos, where the Roman Catholic clergy by their culture, refinement, and spiritual influence as well as by their fine schools play a leading part in the advancement of the community. There are many families bearing famous Italian names, but the Italian language has disappeared, and this element is in other respects assimilated to its surroundings. Superstition still lingers in the islands, especially amongst the seafaring population, and the number of churches and shrines—mostly erected in fulfilment of vows—is remarkable. Ténos is one of the religious centres of the Greek world.

Nowhere have modernizing influences been more active

than in the Cyclades. The island Greek is quick and adaptable: the increase of intercourse (steamers, telegraphs, telephones, newspapers, correspondence, &c.); the spread of commerce, education, travel; the growth of wider sympathies and attachments, particularly of royalist sentiments; and above all the influence of returned emigrants have largely obliterated the old customs and superstitions, and modified dress and manners. The distinctive island costumes have now all but disappeared; life in the islands is daily assuming a more business-like aspect, and social and political horizons are wider. Thus, while the party-spirit is still rampant, this now tends to centre around Athenian politics and less around local persons and interests. Island pride and patriotism are still strong (cf. Ándros shipowners; see p. 54); an islander rarely appeals to a fellow-islander in vain, especially abroad, but the intense inter-island jealousy is decaying.

The people are still fond of games, dancing, and café gossip, and they show, especially in Ténos, physical and social traits, such as a taste for music, perhaps traceable to Italian blood. Women are well treated, and family life has agreeable and sometimes charming features. The islanders are hospitable, peaceable, intelligent, industrious, good-humoured, and fairly honest, though the character sometimes assigned to them of sturdy independence is largely a fiction.

The island character, like the islands themselves, is varied, and islanders nowadays play no inconsiderable, though a little-recognized, part in the enrichment of the national character.

GENERAL ECONOMIC CONDITIONS

Measured in the ordinary terms of commerce the economic value of the Cyclades is small and destined to be increasingly overshadowed by that of the newly acquired islands. Yet the Cyclades will always be of importance to Greece, and even now they have in some respects a wider significance. Where the latter is the case statistics are usually available; the absence of figures on the other hand does not always indicate the unimportance of the product in question. For internal

Greek trade accurate statistics are not usually kept, such figures as are given being mostly based on estimates, and moreover there is a considerable amount of economic freedom and also of smuggling in the islands.

The Cyclades differ widely in size and productivity, but size is not always a criterion of value. Syra, Sériphos, and Théra are relatively small islands, but they are amongst the most important. The variety of conditions (rocks, soil, water-supply, &c.) often causes a great variety of production even in the one island, and in so small an area this implies limitation of quantities. So too most of the islands have reached the limit of their productivity and, except perhaps in respect of mineral wealth, are capable of no further development. In this respect they differ both from the mainland and from those Aegean islands which suffered the reality of Turkish rule. Further most of the islands are fully populated, and man and beasts consume a great part of the produce. Thus, though most islands export something to balance their necessary imports, a good deal of this trade is purely local, and this together with the variety of their products gives the Cyclades as a whole an economically self-contained character. Syra is the chief collecting and distributing centre of this local trade, but a good deal of the more important island trade passes it by.

The surplus population has to emigrate, and of late years emigration has gone beyond these limits, and many young men and women prefer the cities (Athens, Alexandria, Constantinople) to the dull island life, though most islanders ultimately return to their homes. The Cyclades furnish their quota of foreign emigrants also (see Vol. I, p. 171). A relatively large proportion of the inhabitants live outside their islands : there are said to be as many of the people of Íos and Pholégandros living abroad as in the island. The causes of emigration in the Cyclades are mainly economic and not to any extent political (e. g. owing to war, persecution, &c.), and the volume therefore is and will probably remain constant.

Besides regular emigrants there is a considerable mobile population composed mainly of labourers on seasonal or

temporary jobs. The potters of Sípunos accept work in neighbouring islands and return when the demand for their wares is satisfied. The masons of Kóρθιον (Ándros) and Ténos find work in the East and return each year with their earnings. Field-labourers and agriculturists go to Athens and the mainland in the ' off ' season, returning when the island vineyards and tillage again require their labour.

Labour for private purposes is thus usually at hand when and where required, and the unlikelihood of large and rapid industrial developments in these islands makes it unlikely that the labour problem will ever be as serious as it is, for instance, in mainland Greece and Crete. The island workman is quick, adaptable, and industrious, and together with the returned emigrants contributes considerably to the wealth of the islands. Labour on the whole is cheap. The Syra factories wherever possible employ women and girls, and the standard of living is low even for men. Miners are paid 5-7 drachmaí for skilled and 3·50-4·50 drachmaí for unskilled work, but there were serious strikes both in Náxos (1913) and Sériphos, and wages during the war were largely increased. The war has affected the Cyclades severely, and there was much distress accompanying shortage of supplies and a general rise in prices. The peasant producer suffers from his remoteness, his ignorance of prevailing prices, and the uncertainty and instability of island conditions. Thus he is much at the mercy of middlemen, often agents of large Piræus buyers, who trade on his avarice and his ignorance, and at other times by ill-advised hoarding (against a better market or a famine at home) he lets valuable opportunities go by.

The Cyclades are less subject to serious fluctuations in production than some of the larger and more important islands of the Aegean, but, except where foreign capital has stepped in, their economic life has a piecemeal and baffling character. Nor has Government so far succeeded in regularizing it to any great extent or in defeating smuggling and other corrupt practices.

Agriculture and its allied pursuits are the chief source of

wealth; the manufactures and industries of Syra probably come next. Mining on the other hand brings little direct profit, except in wages, to the islands, most of the larger concerns being run with foreign capital.

AGRICULTURE AND KINDRED PURSUITS

The people of the Cyclades have always been in the first place agriculturists. Since the decline of the Venetian feudal overlords the land has nearly all passed into the hands of small proprietors. Only in Íos and one or two other islands are there still large private estates; the land belonging to monasteries has in recent times been much curtailed, and there is practically no Government demesne land. To this cause chiefly are attributable the remarkable enterprise and industry of the islanders in developing their possession, and it is noteworthy that Íos, though not infertile, is a relatively unproductive island.

The barren appearance of the islands is deceptive: there are few plains, but the numerous valleys are rich, warm, well watered, and usually intensively cultivated; their sides are often terraced with wonderful skill and patience to high levels; advantage is taken of upland hollows, and even the barren and rocky areas are made to serve for cattle.

In point of productivity the islands offer great contrasts, the determining factor being not so much size as geological formation. The schist and volcanic areas are the most fertile, the limestone and granite often extremely barren. So too the variety of physical and the diversity of rock formations give rise to a great variety of production often within the same island (e. g. in Páros) with corresponding limitation in quantities. But what the inland products lack in quantity they atone for in quality: island vegetables, olives, wine, and cheese are of first-class flavour, and the young cattle (lambs and calves) are highly prized.

The valley-bottoms are mostly devoted to vegetable production, and artificial irrigation is resorted to. Syra, Ándros, and Náxos are noted for their vegetables (potatoes, tomatoes,

onions, &c.), while Kéos, Síphnos, and Théra also deserve mention. Tobacco cultivation, though it has lately made headway (especially in Amorgós, Náxos, and some other islands), is unlikely to assume large proportions. Of greater importance is fruit-growing. In Ándros, Náxos, Kéos, and Síphnos the well-watered lower valley-slopes are clothed with fine groves, and the lemon, orange and mandarin, citron, and almond crop of these islands is of considerable value. Practically all islands produce wine of fair quality, but that of Théra and Páros, and to a less extent of Kéos, Ándros, and Síkinos, is of exceptional value and importance. The vines grow on lower sunny slopes or hills and in upland depressions, while the decomposed tufa of Théra is especially favourable. Between the vines grain (as in Théra) and pulse (peas and beans) are often grown, and the higher slopes and terraced plots and the more arid upland tracts are regularly devoted to these. The grain mostly grown is mixed barley and wheat, sometimes pure barley, seldom wheat alone, but the production is on the whole scanty and rarely sufficient for home needs. Pulse on the other hand is often exported, notably from Théra and Síphnos. The olive and olive-oil production of the Cyclades, though of good quality (especially in Amorgós), does not amount to much, Náxos being the only considerable producer. Olives occupy sheltered sunny slopes and depressions, and the Trageía basin in Náxos contains the largest groves. Single olive-trees in many islands are scattered along with figs about the hill-side terraces, but figs, except in Ándros, Síphnos, and Syra, are not largely grown. Kéos has important oak forests producing valonia, and the southern Cyclades (the Mélos and Théra groups and the Southern Diagonal Series) grow a certain amount of cotton. The warm moist climate of these is favourable, and cotton cultivation was once important here. Viticulture has largely replaced it, and now only enough cotton is produced for home spinning. Similarly the mulberry-trees once common in Ándros and Ténos have been replaced by oranges and lemons since the decline of the silk industry. Of interest

are the bamboo reeds grown in Ándros, Náxos, Syra, and Donoúsa and used as shelters for vegetable gardens to permit of early crops. A feature of Náxos are its aloes (*Agave americana*) used as hedge-plants.

All the islands keep some live-stock, and the more barren the island the more important as a rule are its animals (cf. the Southern Diagonal Series and Kýthnos). The higher and barer areas are devoted to goats and sheep, and many islets and rocks are uninhabited save by shepherds with their herds and flocks. The methods employed differ in different parts. In the northern Cyclades (Ándros, Reneía, Kýthnos, Kéos) cattle are kept in walled enclosures, single beasts being often tethered on the hill-side terraced plots in fallow time or after harvest. In the southern Cyclades, where there are larger semi-waste areas, the flocks and herds roam loose with herds-men in the manner of the mainland. Asses and mules are found in all islands; they are usually the only means of transport and are extremely hardy, some breeds (e. g. those of Ténos) being famous. Horses exist in small numbers only in Kéos, Syra, Donoúsa, and some other islands and cannot be recommended. Ándros work-oxen are noted, and Náxos, Kéos, Ándros, and Ténos all raise cattle. Sheep are grown almost everywhere for their wool (spun at home) and meat, and goats supply flesh and milk, from which the fine island cheese (Páros, Kýthnos, Íos) is made. Pigs abound in many islands, especially in the villages, and the sucking-pigs, lambs, calves, and kids are much prized. Owing to the scantiness of summer pasture they are killed while still extremely small. Most islanders keep poultry; so fowls and eggs are plentiful, while in Ténos and Síphnos large numbers of pigeons are kept for food and for manuring purposes, their square tower-like cots being conspicuous on the hill-sides. Bee-keeping is a profitable industry in many islands, and the honey of Kéos, Náxos, Páros, Íos, and Síphnos is of fine flavour.

The following statistics are based upon those given in Vol. I of this handbook (pp. 145, 146). They are meant to exhibit the economic capacity of the Cyclades in relation to

that of Old Greece as a whole. The figures should be regarded as approximate only.

LAND AREAS AND ECONOMIC DISTRIBUTION (see Vol. I, p. 145)

	<i>Total Area</i> (sq. miles)	<i>Percentage of Total Area.</i>				
		<i>Culti- vation.</i>	<i>Pasture.</i>	<i>Forest.</i>	<i>Marsh, &c.</i>	<i>Waste</i>
Continental Greece .	7,347	23	13	25	1.3	39
Euboea and Northern Sporades . . .	1,611	19	14	13	3	52
Thessaly . . .	5,027	27	23	19	2	27
Arta . . .	404	11	21	29	1.5	37
Ionian Islands . .	1,008	41	10.5	1.5	3.6	42
Cyclades Islands . .	894	16	20	0.5	0.4	62
Peloponnese . . .	8,651	28	10	14	2	49

N.B.—(i) High percentage classed as waste but mostly utilized as pasture; (ii) small proportion of cultivated land in Cyclades (but of relatively high productivity); (iii) small proportion of forest; (iv) small proportion of land uncultivated (marsh, &c.) but still capable of cultivation; (v) the total area of the Cyclades is 3.6 per cent. of the total area of Old Greece, and their cultivated area is 2.3 per cent. of the cultivated area of Old Greece.

DIVISION OF CULTIVATED LAND (see Vol. I, p. 145)

	<i>Total Area</i> (sq. miles)	<i>Percentage of Total Area.</i>			
		<i>Corn, cotton, Fruit and tobacco, &c.</i>	<i>vegetables.</i>	<i>Vines.</i>	<i>Olives and figs</i>
Continental Greece .	1665	84	1.7	8	5
Euboea and Northern Sporades . . .	295	82	1.5	8	9
Thessaly . . .	1,390	92	1.9	3	3.5
Arta . . .	46	96	2	1	1
Ionian Islands . .	421	—	—	—	—
Cyclades Islands . .	147	67	5	23	5
Peloponnese . . .	2,391	68	2.9	19	11

PRODUCTIVITY (see Vol. I, p. 146)

	<i>Corn.</i>	<i>Veget- ables.</i>	<i>Tobacco.</i>	<i>Cotton.</i>	<i>Grapes.</i>	<i>Olives.</i>	<i>Fodder ables.</i>
Quantity (in tons).	13,141	4,411	52	262	11,816	4,492	542
Percentage of total production of Old Greece . . .	2 %	5 %	0.4 %	2 %	3.7 %	3.7 %	0.6 %
	<i>Horses, asses, mules.</i>	<i>Cattle.</i>	<i>Sheep.</i>	<i>Goats.</i>	<i>Pigs.</i>	<i>Poultry.</i>	<i>Bee- hives</i>
Total numbers	12,990	13,655	63,118	62,093	9,093	58,754	10,321
Percentage of total numbers in Old Greece . . .	3.6 %	4.5 %	1.8 %	2.3 %	4 %	2 %	4 %

These figures are probably still approximately correct, except that the production of tobacco for 1917 was estimated at about 215 tons (=0·8 per cent. of the tobacco production of Old Greece), over half coming from Amorgós. It must be emphasized, however, that the relative value of the figures given would be largely altered if taken in relation to the production of New Greece as a whole. For example, the tobacco crop of Macedonia and the islands off the Asia Minor coast is out of all proportion to that of any district of Old Greece.

The value of the agricultural products of the Cyclades is estimated at roughly £350,000 annually.

The following figures (approximate) will illustrate the annual amount and variety of agricultural production in individual islands (two rich and two poor), some further figures being given under 'Trade' (see p. 35):

Náxos : oranges and mandarins, 1,000,000 pieces ; citrons, 250 tons ; other fruits, 250 tons ; black olives, 250 tons ; potatoes, 2,500 tons ; onions, 400 tons ; tomatoes, 300 tons ; tobacco, 38 tons ; barley, 5,300 bushels ; olive-oil, 147,000 gall. ; wine, 300,000 gall. ; honey, 50,000 gall. ; cheese, 46 tons ; besides 3,000–4,000 head of cattle as well as poultry.

Ándros : 40,000,000–45,000,000 lemons ; 10,000,000 oranges ; 1,000,000 figs ; 750,000 lb. onions ; 35,000 bus. grain ; 13,500 lb. pulse ; besides olives, cattle, sheep, &c.

Kýthnos : 35,000 lb. figs ; 8,000 lb. beans ; 25,000 lb. cheese ; 17,000 bus. grain ; besides some honey, wine, and live-stock.

Íos : 10,000 gall. wine ; 3,000 gall. olive-oil ; 28,000 lb. pulse ; 28,000 lb. cheese ; 36,000 bus. grain ; and some live-stock.

MINING

The Cyclades are rich in minerals, and this source of wealth is probably capable of further development. Iron ores occur in considerable mass in the islands of the Western Series

(Sériphos, Sípgnos, Kýthnos, Kéos) and in smaller quantities in Syra and Ándros. Iron manganese is found in Mýkonos, Mélos, Sípgnos, Sériphos, and Kímolos, and iron pyrites in Mélos. Silver-lead ore (galena) occurs in workable quantity in Sípgnos, Mýkonos, and Ándros, and zinc in Antíparos, Ándros, and Donóusa. Emery is worked in Náxos, but is found in Páros and Íos also. Mélos produces gypsum, sulphur, and salt, and this last—like emery a Government monopoly—is produced also in Náxos and Therasía. Kímolos has given its name to a fuller's earth. Asbestos could probably be found in Ándros and elsewhere, and in the Makariaís group of rocks ($3\frac{1}{2}$ miles east of Náxos) is said to be a deposit of good lithographic limestone. Gold was anciently a source of wealth and fame to Sípgnos and might still be found in its flooded workings, and copper occurs in small quantities in Ándros and one or two other islands.

Of quarried products the marble of Páros is most famous, but that of Ténos and Ándros is also good. Mélos has a volcanic rock suitable for millstones, and Théra is noted for its volcanic cement (*pozzolana*) and powdered pumice-stone. All the islands abound in good building-stone, and some have good pottery clay.

The development of these resources has as a rule been spasmodic and the output fluctuating. Many of the deposits are small; others have been worked at intervals for centuries and are now nearly worked out. Lack of capital, transport facilities, and enterprise causes the abandonment of others, and the islands abound in deserted workings. The absence of coal and iron industry in Greece affects adversely iron-mining. Many of the smaller mines moreover are owned by single individuals or small groups who can work their holdings only when markets and labour conditions are favourable. Thus the iron mines of Kéos and Syra, some of those in Sériphos and Kýthnos, and some of the iron-manganese mines of Mélos, Kímolos, Mýkonos, and Ándros have ceased working but may begin again. The larger and more valuable deposits on the other hand either belong to the Government or are worked

with foreign capital with greater steadiness and success. The Náxos emery mines are a Government monopoly, and the output (and its quality) is regulated, varying in normal times between 7,000 and 10,000 tons annually, worth £30,000–£40,000. Latterly, however, the output has been increased to 15,000–24,000 tons annually, and its value may amount to about £80,000–£100,000 yearly. Government property also are : the salt-works of Mélos, Náxos, and Therasía ; the millstone quarries of Mélos and one of the iron mines of Sériphos. Most of these are worked by contractors. The largest iron mines in Sériphos are owned by a private company in which French capital is represented ; they have an average annual output of 170,000–180,000 tons, and the total production of Sériphos, Síphnos, and Kýthnos (200,000–220,000 tons yearly) has an average value of £45,000. The iron-manganese mines of Mýkonos are worked by the French Lávrion Co., and the total output of this mineral for Mýkonos, Mélos, and Síphnos is about 8,700 tons yearly, worth approximately £14,000. The output of the zinc mines of Antíparos, also belonging to the French Lávrion Co., is estimated at over 3,000 tons yearly, the net profits on working in 1912 being about £600. The export of ores, mainly zinc, from Donoúsa in 1908–9 amounted to 700 tons. The annual export value of Thera *pozzolana* is £6,500–£7,000. The silver-lead ores of Mélos and Mýkonos have been worked, and the net profits of the Mýkonos mine in 1912 were over £1,100. The export value of Mélos gypsum and millstones (the latter a Government-owned industry) amounts to about £1,500 annually. Finally the marble quarried in Ténos by the British firm of Grecian Marbles (Marmor), Ltd., has been estimated at 545 tons in 1913, worth £6,500, and the same company has works in Páros and Náxos (cf. Northern Sporades, p. 187).

The total annual mineral production of the Cyclades is in normal times worth somewhat over £100,000. This is rather more than 10 per cent. of the total production of the kingdom. Practically the whole of the output is exported, but beyond wages little of the profits accrue to the islands.

FISHING AND MINOR INDUSTRIES

Syra is the only real industrial centre of the Cyclades. Here shipbuilding on a small scale, ship-repairing, tanning, cotton-carding, spinning, and dyeing, glass-blowing, milling, macaroni and sweet (*loukoúmi*) manufacture, tobacco-cutting, and other minor industries occupy about 4,000 people, but of late there has been a decline, and Piræus tends to absorb much of this industry.

The people of the Cyclades are not fishermen to any extent. There are a few fishing villages (e.g. in Kéos), but these are mostly inhabited by immigrants, and in general fishing is left to men from Hýdra, Spétsai, the Sporades and the Albanians of the Argolic coast. Fish are plentiful enough as food in the islands, but fishing is not organized or conducted on a large scale, and a great deal of salt fish is imported. Most fishermen use dynamite. This practice is illegal; it is said to impair the eating value of the fish and drives them from their coastal haunts so that they are growing scarce. Sponge-fishing has much declined, though a little is still done by the fishermen of Kós and Kálymnos in the southern islands. Fishermen find odd jobs as boatmen in the larger harbours, and most owners of sailing vessels smuggle on occasion. The islanders are not seafarers to any degree: most islands possess a good many caiques (sailing vessels 15–80 tons), and the sailors of Ándros, Mýkonos, Mélos, and Kímolos are well known, but the seafaring population is not large.

In Síphnos and Amorgós there is a pottery industry supplying local needs, and the potters of Síphnos have a local reputation. They accept work in other islands. The value of the pottery industry to Síphnos is estimated at £4,000 annually, but glaze has to be imported.

Since a disease attacked the silk-worms in the last century the silk industry, once flourishing, has now almost disappeared from Ándros and Ténos, and even lace-making, once a favourite pursuit of island girls, has largely died out. There are several small woollen mills in various islands, and in

most islands some peasant arts and crafts still linger (e. g. spinning woollen and cotton garments, basket-weaving in Amorgós, &c.).

TRADE AND COMMERCE

Most of the trade of the Cyclades is only of Greek or local importance, but part is concerned with foreign (Levantine or European) markets. Some islands, owing to the variety of their products and the simplicity of island life, are largely self-supporting, but since they maintain a relatively large population they consume most of what they produce and trade little. Such an island is Ténos. Other islands which produce less variety but greater quantities export and import more without much profit to themselves. Some few are wealth-producing in a more literal sense.

There is a good deal of purely local trade which is little more than barter. Various islands, with their various products, supply one another's needs, and the Cyclades are in this way largely self-supporting. Syra is the chief centre for this trade, and, while it consumes a good part of the surplus island products, it distributes flour, manufactured and colonial (sugar, tea, coffee, &c.) goods. A certain amount of the local trade, however, is direct with Piræus or other Greek mainland ports (e.g. Kéos and Lávrión). Very few islands produce enough grain for home consumption, and all, even those which export barley, rely on imported flour. As instances of the relative importance of production and trade in smaller islands Íos and Kýthnos may be quoted. Íos annually produces about 36,000 bus. grain; 10,000 gall. wine; 3,000 gall. olive-oil; 28,000 lb. pulse; 28,000 lb. cheese. It exports about 10,000 bus. grain; 4,500 gall. wine; 12,000 lb. cheese. Kýthnos annually produces 17,000 bus. grain; 35,000 lb. figs; 8,000 lb. beans; 25,000 lb. cheese, besides about 6,000 head of live-stock. It exports about half its barley and cheese, one-third of its figs, and about 1,700 lambs and calves. For the more important islands few figures are available for agricultural and such-like exports.

The Syra early vegetable crop is of an estimated value of £50,000 annually. The lemon crop of Ándros is worth £30,000–£40,000, and the potato and fruit crop of Ándros must be worth much more. Náxos exports 3,500 head of cattle and 10,000 hides annually, and the total exports of both these islands must greatly exceed in value the figures given above. The wine export of Páros and the tobacco export of Amorgós are valuable, and for Théra and Kéos the following figures for 1914 are available :

Théra : wine and grape products, £32,923 ; tomato paste, £9,012 ; beans, £4,016 ; volcanic cement, &c., £6,056.
Total : £52,000 (approx.).

Kéos : valonia (1,000 tons), £6,400 ; barley, £4,000 ; cattle, £4,400 ; charcoal, £1,040 ; miscellaneous, £1,060. Total : £16,900.

The total volume of trade (exports and imports) of Théra was £70,720 ; of Kéos, £29,140.

The island products are conveyed from the harbours of Ándros and Náxos by steam or sailing vessels to Syra or direct to Piræus. But the wine of Théra finds its way to Russia, the United Kingdom, and the East ; that of Páros to Constantinople, Smyrna, and Egypt ; the early vegetables of Syra go to Athens, Alexandria, and Marseilles ; and the lemons of Ándros to England, Russia, and Constantinople. The more important mineral exports (see 'Mining', p. 31) go abroad. Náxos emery passes through Syra (see below), where there is a Government dépôt for it. Other ores (iron, iron-manganese, zinc) and marble go either through Syra or direct to their markets. Mélos millstones go mostly to Crete, Egypt, and Trieste.

The foreign-trade returns of Syra, especially of imports, are to some extent an index of the prosperity and requirements of the Cyclades as a whole. The volume of Syra's annual foreign trade (average for 4 years) is £390,000, of which £318,000 are imports and £72,000 exports (exports to Greece—macaroni, sweetmeats, textiles, cut tobacco, tanned leather, &c.—not being included), but of late years there has been

a steady decline. Of exports the most important were Náxos emery (averaging 8,000 tons, value £30,000), which went chiefly to the United States, United Kingdom, and Holland; iron ore from Sériphos, &c. (160,000–200,000 tons, valued at £30,000–£40,000). The export of citrons in brine and dressed leather, once important, has been temporarily suspended. The exports went chiefly to Malta, France, United States, United Kingdom, Austria-Hungary, and Germany. The chief imports are coal, wood (for building purposes), grain, raw cotton, sugar, dried fish, raw leather, colonial products, and machinery. Of these imports 50 per cent. come from the United Kingdom, and in addition imports from India (rice, leather, indigo, bags, &c.) amount to over £20,000. The remaining imports come chiefly from France and Austria-Hungary.

SHIPPING

The greater part of the island trade is done by small Greek sailing vessels or by the Greek island steamers (see below, p. 39). Thus at the port of Théra about 400 vessels, averaging 50,000 tons, call annually. Of these over 360 are Greek sailing vessels, about 30 are Greek steamers, and only 5 or 6 are small Italian or Austro-Hungarian sailing vessels. Mining products (e.g. Náxos emery), however, are usually conveyed in steam vessels either to Syra, whence they are re-exported, or direct to their markets. Thus the annual iron-ore output of Sériphos is shipped in about 40 steamers, averaging 70,000 tons, of all nationalities (British, Greek, and Austro-Hungarian: about 10 vessels each). Kéos supplies about 350 steamers of all nationalities with 40,000–60,000 tons of coal annually (25 per cent. of these being British; 30 per cent. Greek; 20 per cent. Austro-Hungarian; 10 per cent. Italian), besides having its own island trade, which is carried by 200–300 small sailing vessels and coasting steamers annually. By far the most shipping comes to Syra. Its annual foreign trade is borne in about 1,000 steamers of all nationalities, averaging 900,000 tons. Of these 70–80 per cent. are Greek vessels, a fair proportion of

them owned in Syra itself ; 7 per cent. (representing over 100,000 tons) British ; Austro-Hungarian and Italian coming next. The island trade of the same port is carried in 1,000 sailing vessels, averaging 18,000 tons (90 per cent. Greek, the remainder mostly Italian).

There were registered in 1914 at Syra 93 vessels, amounting to 114,878 tons (including 30 cargo vessels over 1,600 tons) or about one-fifth of the whole Greek mercantile marine. About £1,000,000 of Syra capital is said to be invested in the shipping industry. At Ándros 60 vessels of 113,406 tons were registered in 1914. The latter vessels, which included 43 cargo vessels over 1,600 tons and 3 transatlantic liners, are mostly the property of the Ándros shipping magnates. They are nearly all engaged in foreign trade (formerly largely in the Black Sea trade) and were registered at Ándros through the patriotism of their owners.

HARBOURS

The Cyclades possess numerous fair harbours and four first-class ones, viz. Mélos, Náousa (Páros), Kéos, and Syra. The first three are capable of accommodating fleets and have actually been so used at various times. All islands except Síkinos and Kýthnos have bays of varying degrees of size and safety capable of accommodating small sailing vessels and coasting steamers, and sometimes collocations of islands form havens (e.g. Antíparos and Páros).

The capitals of most of the larger islands have ports with moles and piers ; water and food can usually be obtained here in small quantities. Coal can be had at Syra and Kéos (see below). Quay appliances for loading and unloading exist only at Syra, Kéos, and Sériphos (and perhaps at one or two other places where ores are shipped) ; but boats and lighters are usually obtainable at ports where the island steamers call. Few harbours except those mentioned above as first-class and that of Gávreion (Ándros) are safe in all weathers, and some are dangerous for sailing craft owing to sudden land-gusts from neighbouring heights.

Syra is the only first-class commercial port. It has facilities for docking and repairing ships upon a fairly large scale (93 were repaired in 1914) and in this respect ranks almost with Piræus. There are also construction yards for small sailing vessels, and as many as 14 vessels (1 of 282 tons, 1 of 83 tons) besides 2 lighters were built in 1913. The bunkering business of Syra has latterly fallen off by 80 per cent.

Most of the other harbours are unused or concerned only with the trade of their respective islands (e.g. Gávreion, Mélos, Náousa (Páros), practically unused ; Ándros, Paroikia, Náxos, Séríphos, Théra, island export and import trade). Kéos, however, conveniently situated on the north-east passage, was before the war considerably used as a coaling dépôt, a Piræus company having a branch there. It is at present closed, presumably only temporarily. Íos harbour, a convenient haven for north or south-bound vessels, is often resorted to in bad weather, but is otherwise unimportant.

COMMUNICATIONS

The means of communication with the mainland or other islands are steamer, sailing vessel, telegraph, and telephone. Several lines of steamers serve the Cyclades in normal times. They belong to Greek companies (usually of Piræus) and are of the tonnage usual for Greek island and coasting vessels ; many are new and well appointed, and they run to time. They carry mails, passengers, and a good deal of the island trade. All the islands are visited (outwards and inwards) by at least one boat per week and the more important islands by two or three weekly. These steamers mostly ply between Piræus and Théra via Syra, or make the round of the north-eastern islands (Ándros, Ténos, Mýkonos, and Syra) or of the western group (Kéos, Séríphos, &c.). Passages can sometimes be had on cargo steamers (e.g. from Náxos to Syra on the emery-boats), but poor people or those unable to wait for the steamers or wishing to get to out-of-the-way islets and ports use sailing vessels, which can usually be got cheaply. Syra is in daily communication (by steamer and

sailing vessel) with Piraeus (8–10 hrs.) and with most of the islands of the Cyclades and Lávrion ; frequently with Chíos, Sámos, and other Asiatic islands ; weekly with Salonica ; irregularly with the Northern Sporades and rarely with Crete or Egypt direct, for which boats must usually be got at Piraeus. In rough weather communication by sailing vessel is apt to be interrupted for days together, and even steamers sometimes cannot sail. Kýthnos and Síkinos are often isolated for long periods owing to storms.

The postal and telegraphic centre is Syra ; there is also an office of the Eastern Telegraph Co. there with main cable lines to Piraeus (3 lines), to Chíos (2 lines), and Crete (1 line), besides a low-power wireless station reserved for Government use. The telegraphic communication of the Cyclades with each other and with the mainland is (under normal conditions) by three lines owned by the Greek Government but mostly worked by the Eastern Telegraph Co. The most important of these is the central system linking Athens and Piraeus with Syra, Syra with Páros, and Páros with the south-eastern and south-western islands of the Cyclades. Another line connects the north-eastern islands through Euboea with Athens ; this is linked with the central system through Ténos. The third line connects the western islands (from Mélos northwards) with Athens through Kéos and Lávrion ; this too is linked with the central system through Síphnos and Páros. If the lines Ándros–Euboea, Kéos–Lávrion are cut, Syra is thus still connected with all islands of the Cyclades and is their only means of telegraphing by cable to the mainland. Some of the island lines are in need of repair, and the instruments are often obsolete, and some have ceased working.

A good many of the inter-island cables can be used for telephoning ; the instruments are often defective. The more important islands (Syra, Ándros, Páros, Síphnos, and Amor-gós) have also well-developed internal communication by telephone.

Inland communication is difficult. There are no long

roads : in Syra there is a good road (about 12 miles) leading across the island from the capital to Dellagrázia Bay on the south-west coast ; in Nákos a good road (9 miles) leads inland from the capital towards the centre of the island ; there are smaller stretches in Ándros, Théra, Kýthnos, Mélos, and Kéos (see under those islands). As a rule there are only tracks, mostly rough and steep and sometimes (e.g. in Ándros and Amorgós) difficult and dangerous. Horses can be obtained in Kéos and Syra, but the usual means of transport are mules or asses ; these are hardy and sure-footed, and plentiful in most islands. There are few wheeled vehicles. The mines and quarries usually have light railway lines from the workings to the coast with trucks (sometimes drawn by ponies) and loading facilities.

AREAS AND POPULATION

The area of the Cyclades is estimated at 1,050 square miles, and the population in 1907 was 130,378 or about 124 to the square mile (males being slightly in excess of females, emigration affecting both sexes about equally ; see Vol. I, p. 171). These figures are approximate only ; they show a falling off in population since the census in 1896, which gave 134,152. The difference is due no doubt to emigration but not necessarily foreign emigration. The Cyclades, however, are still more densely populated than most parts of Old Greece, which averages about 105 to the square mile.

Of individual islands five contain over 10,000 inhabitants : Syra, 27,350 ; Ándros, 18,037 ; Nákos, 16,694 ; Théra, 12,109 ; Ténos, 11,634. Besides these only Páros (7,623) and Mélos (5,573) are over 5,000. The density is greatest in Syra (about 880 per square mile) ; next come Théra (440) ; Sérifhos (158) ; Ténos (147). Nearly all the islands show a falling off, and it is noticeable that in all except one (Kímolos) of those which show an increase either mining (e.g. in Nákos, Mélos, Sérifhos, and Mýkonos) or some other industry (e.g. tobacco cultivation in Amorgós) has been gaining ground.

The largest town is Syra (23,800), the fifth largest town in

Old Greece. In the larger and richer islands the population is well distributed in villages, the larger of which average 2,000–2,500 inhabitants.

ADMINISTRATION AND REPRESENTATION

The Cyclades form a *nomós* (see Vol. I, p. 121) with centre at Syra. Here are the offices of the nomarch and his staff; the head-quarters of gendarmerie for the *nomós*; courts of appeal, first instance, and others; 'nome' treasuries and head customs; post and telegraph and other administrative offices. The Cyclades are subdivided into 7 police districts with centres in Syra, Ándros, Ténos, Kéos, Mélos, Náxos, and Théra. There are 101 'communities' (*koinótetes*) with 'mayors' (*próedroi*). Custom-houses exist in all the more important ports.

There is a Greek Orthodox archbishop at Syra, and bishops at Náxos and Théra; Roman Catholic archbishops at Syra and Náxos, and bishops at Ténos and Théra. The Cyclades send 13 deputies to the Legislative Chamber (see Vol. I, p. 119).

FOREIGN REPRESENTATIVES

The following Great Powers were represented in the Cyclades before the war:

Great Britain: Syra (C. and V.C.); Théra (C.A.); Séríphos (C.A.).

France: Syra (V.C.); Théra (C.A.); Kéos (C.A.); Mýkonos (C.A.); Náxos (C.A.).

Austria-Hungary: Syra (V.C.).

Germany: Syra (C.); Théra (C.A.); Kéos (C.A.).

Italy: Syra (C.).

Besides these there were consuls or vice-consuls of several other countries at Syra.

MONEY

The par value in British money of the notes and coins generally current is as follows:

		£	s.	d.
Bank-notes :	100 drachmaí	=	3 19	4·4
	50 „	=	1 19	8·2
	20 „	=	15	10·5
	10 „	=	7	11·25
	5 „	=	3	11·62
Silver coins :	2 „	=	1	7
	1 drachmé	=		9·5
	50 leptá	=		4·75
Nickel coins :	20 „	=		1·9
Nickel or bronze coins :	10 „	=		·95
	5 „	=		·47
Bronze coins :	2 „	=		·19
	1 leptón	=		·09

Care must be taken not to accept coins which are either spurious or no longer legal tender.

(For further information see Vol. I, pp. 175 and 176.)

WEIGHTS AND MEASURES

The metric system was legally established in Greece in 1836. The general public, however, have not taken to it. Thus, while the Government uses the system in the measurement of area and distance, e.g. in the sale of Government lands or in marking the distances along national roads, the public always uses the old *péche*, &c. In regard to weights and measures of capacity neither the Government nor the public uses the metric system, both preferring to use the *oká* or oke.

Metric System

1 métron or péchys = 1 metre = 39·37 inches.

1 hekatostómetron or dáktulos = 1 centimetre = 0·393 inch.

1 chiliostómetron or grammé = 1 millimetre = 0·039 inch.

1 chiliómetron or stádion = 1 kilometre = 1093·63 yards or 0·621 mile.

1 áron = 1 are (100 sq. metres) = 119·6 sq. yards.

1 royal strémma = 10 ares = 1196 sq. yards ($\frac{1}{4}$ acre nearly).

10 royal strémmata or 1 hectáron = 1 hectare = 2·47 acres.

1,000 grammária (1 lítra or 1 chiliógrammon) = 1 kilogram = 2·2 lb.

1 lítra = 1 litre = 1·76 pint.

1 kotýle = 1 decilitre = 0·176 pint.

1 koilón = 1 hectolitre = 22 gallons.

Old System

1 old (Constantinople) péche = 0·65 metre = 25·6 inches.

1 builder's péche (used for land measurement) = 0·74 metre = 29·13 inches.

1 old strémma = 1,270 sq. metres = 1,519 sq. yards ($\frac{1}{3}$ acre approximately).

1 drámi = 3·2 grammária (grammes).

400 drámia = 1,280 grammária = 1 oká.

44 okádes = 1 kantári (or statéras) = 123·2 lb.

18 kantária = 1 tónnos or toneláda = 1 ton (nearly).

1 botsá = 2 okádes.

9 drámia = 1 oz. av. (nearly).

141 drámia = 1 lb.

312·5 drámia = 1 kilogram.

1 oká = 1·28 kilogram = 44 $\frac{1}{2}$ oz. (2·8 lb.).

40 okádes = 1 cwt.

800 okádes = 1,000 kilograms = 1 ton (approximately).

300 drámia (capacity) = 1 lítra = $\frac{3}{4}$ oká.

1 oká (capacity) = 1·33 litre = 2·35 pints.

3·4 okádes = 4·52 litres = 1 gallon.

The Greek barrel (*varéla*), used especially for measuring wine and olive-oil, has varying weights. In the Aegean islands it = 18 okádes.

CALENDAR

Like the Russians and Serbians the Greeks still use the Julian calendar, so that their time is thirteen days behind that of western Europe. Thus January 1 in Greece is January 14 in England.

The time used in Greece is Russian time, i.e. 2 hours fast of Greenwich.

DETAILED DESCRIPTION

On topographical and bathymetric considerations the following seems the best grouping of the islands :

- (A) North-Eastern Series : including Ándros, Ténos, Mýkonos, Greater Délos (Reneía), Délos, and accompanying islets.
- (B) Northern Central Series : including Syra, Gioúra, and islets.
- (C) North-Western Series : Kéos, Kýthnos, Sériphos, Sípghos, and neighbouring islets.
- (D) Central Series : Náxos, Páros, Antíparos, Despotikó, Strongyló, besides some islets and rocks.
- (E) Southern Diagonal Series : comprising Pholégandros, Síkinos, Íos, Heráklia, Kéros, Donoúsa, Schinoúsa, the Kouphonési, Amorgós, besides numerous small islands and rocks.
- (F) Southern Series : comprising Mélos, Kímolos, Théra, Therasía, Anáphe, and several islets.

The first three groups (A, B, C) comprise all the northern islands and form three parallel systems running from north-west to south-east. The Central Series (D) is a looser group lying rather east of the centre of the Cyclades as a whole. The Southern Diagonal Series (E) forms a line running west-south-west to east-north-east and bifurcates towards the north-east. This group and the Southern Series (F) together comprise all the southern islands, whose general trend is from west to east, athwart that of the northern groups.

In some respects the northern, central, and southern islands can be regarded as groups, having characteristics which distinguish them from each other.

(A) NORTH-EASTERN SERIES

(ÁNDROS, TÉNOS, MÝKONOS, RENEÍA, DÉLOS)

This group is formed by the southerly extension of the Euboean mountain-chain, which, with three notable gaps, slopes down with more or less regularity into the sea beyond Mýkonos.

The three gaps are : (1) Dóro Channel ($7\frac{1}{2}$ miles broad, 218 fathoms deep), a rough and treacherous passage between the towering masses of Euboea on the north and Ándros on the south, dreaded for its strong currents and north-easterly gales ; (2) Stenó Strait (Tó Stenó = 'The Narrows'), a chasm between rugged hills, narrowing at one point (at the south-west) to about 1,100 yards and dividing Ándros from Ténos ; (3) the Strait of Mýkonos, a broader (about 6 miles) and quieter water between Ténos and Mýkonos.

In spite of its spine-like character this island-chain is the largest of all the Cyclades groups, the next in size being the central group, Náxos and its neighbours, which alone exceed it in height. Its inner (south-west) flank is throughout its greater length remarkably straight—Cape Chárakas (at the north-west of Ándros and Anavoloúsa peninsula (in Mýkonos) being the only considerable exceptions. This, together with the abruptness of the mountain-ridge on that side, gives Ándros and Ténos that sharp serrated appearance from the west and south-west which is so characteristic. The geological composition of all these islands is fairly uniform and distinctive ; the climate is colder, damper, and—towards the north-east, where they are exposed to fierce gales—more boisterous than that of the Cyclades in general. To these physical conditions are perhaps partly due the hardihood, energy, and enterprise of their inhabitants. Agriculture, cattle-rearing, and kindred pursuits are the main source of wealth and employment ; mining and quarrying, though much less important, are carried on, and these islands furnish a large number of sailors and emigrants. In the pursuit of

all these occupations the islanders display patience and industry, and they may be said to show more 'character' than many island Greeks. Ándros is the only Cyclades island with distinct races (Greek and Albanian) upon it; it ranks with Náxos, Syra, and Théra as one of the most important of the islands. Ténos is notable for its dense and industrious population, and, whereas Ándros has a north-easterly outlook, Ténos and Mýkonos stand in closer relation with Syra. Altogether this group is one of the most interesting and important in the Cyclades.

ÁNDROS

Area : 149 square miles. (Length : $25\frac{1}{2}$ miles. Maximum breadth : 10 miles.)

Population : in 1907, 18,037. (In 1896 it was 18,804.) Population per square mile : 121.

Products : wine; olives; lemons and other fruits; corn and vegetables; manganese, iron, lead, zinc in small quantities. Table-water (e. g. Sárizes) is exported. The island possesses a valuable merchant fleet trading mostly in foreign waters.

Physical Features

Ándros, the second largest island of the Cyclades, is an oblong mountain block* about four times as long as it is broad, lying north-west to south-east at an angle of roughly 45° , and with its longest side facing south-west. Its outline is least regular on the north-east, where the bays of Ándros and Kóρθιον form large and deep openings, while farther north are two wide but less important bights. The south-eastern corner is missing, the inward slope of the coast here forming with the equal and opposite slope of Ténos a great bight at whose south-western extremity is Stenó Strait (about 1,100 yds. wide). The west coast, in spite of a series of minor indentations and capes, forms on the whole a remarkably straight line; its only serious interruption is the north-western triangular promontory, whose apex is at Cape Chárakas. This promontory shelters under its southern flank the only good harbour of the west coast—and indeed of the whole island—Gávreion bay. Originally a massive rough-topped

tableland tilted down slightly towards the north-east, the island-surface has been so eroded by streams that the original simple features are almost obliterated. The island consists essentially of a main longitudinal ridge or watershed lying along the west coast, with four great lateral spurs, separated by valleys, running out at right angles from it (i.e. towards the north-east). The main ridge, close above and falling sharply to the west coast throughout nearly its whole length, is lower in the north-west, where it rises from Dóro Channel. It rises in the middle to about 3,200 ft. (Mt. Kouvára), and sinks again as it approaches Stenó Strait. The lateral ridges, which, with the exception of the northernmost (Hágioi Saránta), are parallel and roughly equidistant from each other, stretch right across the island. Broad and flat-topped owing to their origin by erosion, they terminate in large blunt promontories on the north-east coast. The valleys which divide them correspond at their head to dips or saddles in the main ridge—which has thus a ruggedly undulating profile—and at their outlet to the bays or bights of the north-east coast. These lateral ridges thus form a series of barriers across the island, and divide it into a number of almost isolated sections with physical and economic features of their own. This is clearly brought out by the stream system. The general tendency of the streams is down the main inclination, from the chief watershed in the south-west to the north-east coast. But the emergence of the lateral spurs has often disturbed this arrangement and these spurs have become independent watersheds feeding the main valleys from lateral glens. Ándros consequently differs from most of the Cyclades in that its physical divisions are clear-cut and require describing in some detail.

The dominating feature of the whole island is the central cross-ridge, Pétaíon. Highest at its point of departure from the main spine (i.e. at its south-western end), where is Mt. Kouvára (alt. about 3,200 ft.), its broad rounded quartz-strewn back sinks gradually as it approaches the north-east coast, where cleft by one main central ravine (that of Vourkotí)

and several smaller ones it terminates in numerous rounded bluffs. This ridge divides the island into halves, economically as well as physically. Almost exactly similar, though on a smaller scale, are the two more southerly lateral ridges, Gerakónas (alt. 2,290 ft.) separated from Pétaion by the Ándros valley, and Ráche (alt. 2,250 ft.) separated from Gerakónas by the Kóρθion valley. Both these latter ridges are higher at their south-western end and are cleft towards the sea into twin spurs. Ráche ridge falls away southwards in wild and desolate slopes to Stenó Strait. The northern part of the island is more irregular. Here the lateral ridge (Hágioi Saránta) is the main feature: it runs almost due N. and is highest at its northern end (2,591 ft.). The main watershed on the other hand flattens out towards the north-west into a barren stony plateau about 1,000 ft. high cut into by deep ravines, while to the south-west it sends off a flattened spur which forms the Cape Chárakas triangle. The Hágioi Saránta ridge is separated from Pétaion by a series of lower spurs intersected by long ravines leading north-eastwards, the whole area forming a marked depression. At the head of this the main watershed falls to its lowest point (956 ft.), though at two other places—at the head of the Ándros and Kóρθion valleys—it sinks below 1,000 ft.

The appearance of Ándros from a distance is that of a rugged and barren mountain mass. Its valleys, which are important, are not at first visible, and this gives the island an inhospitable aspect. The largest valley is that of Ándros, so called because it contains the capital. It is a narrow oblong hollow between the Pétaion and Gerakónas ridges, whose upper end is the 984 ft. saddle in the main watershed and its lower the deep double bay of Ándros. It consists of two parallel valleys separated by a low ridge, on whose seaward extremity the capital stands. Though there is little level ground, the slopes are gentle and well watered, and there is a large space available for cultivation. Kóρθion valley to the south, between Gerakónas and Ráche ridges, is very similar. Twin valleys, separated by a low central ridge, open on the broad oblong bay of Kóρθion.

Though shorter than the Ándros valley, it is much broader and forms a fair-sized plain. Only the upper part, however, is cultivable, the coastal areas being covered with drift-sand. At the north-west of the island, east of Cape Chárakas, is the plain of Gávreion at the head of the bay of same name. It is the only plain of the west coast and is a small and nearly circular depression formed by the convergence of several small valleys from the surrounding hills. Though marshy at its lower end, it is cultivated.

Ándros (called Hydroussa, i. e. the 'Watery Isle'), by the ancients) is the best-watered of the Cyclades. The schist hill-sides abound in springs which form numerous runlets. Springs are found at high altitudes; that of Kryonéri, close under Mt. Kouvára, is at an elevation of over 3,000 ft. The celebrated table-water 'Sárizes' comes from Ándros. In the valley-bottoms wells, with tanks and water-wheels for irrigation purposes, abound, and there are two brooks—the Gialiá (emptying into Ándros bay north of the capital) and the Dipótama (between Ándros and Kórthion bays)—which have a constant flow and drive several mills.

Geology

The geological formation is singularly uniform: crystalline schists and quartz form the greater part of the island. The schists occur in great variety, but green mica schist is commonest. Numerous quartz seams are found in the schist, and of this the heights (e.g. Pétaion) are mostly formed. In the northern parts these quartz seams are rich in iron and manganese (e.g. Hágios Pétros and Vitáli). A certain amount of marble occurs. Though not of the best quality, it has commercial value and approximates to that of Hymettus. In a valley south-east of Kallivári is a rounded mass of serpentine probably containing asbestos.

The complicated fold system of the island has little influence on the general configuration except that the two main valleys roughly follow the division lines between the two main fold systems.

Climate

Ándros is exposed to the full force of the north-east summer trades. These are extremely fierce, especially in the mornings and on the heights, where they prevent the growth of vegetation and hinder the movements of men and animals. Sweeping down over the western ridge they cause serious squalls off the west coast. - In winter the northern heights are often covered with ice and snow, and in all seasons these parts suffer much from clouds and mist (cf. Kéos). They are consequently damp, cold, and miserable. The valleys of the south on the other hand are warm and sheltered in winter, and in summer are cooled by the north-east winds. The west coast is much milder and warmer than the east. In general the climate of Ándros is healthy and invigorating, and its coolness and the abundance of fresh water make it an attractive resort in summer.

Vegetation and Cultivation

In variety of feature and wealth of production Ándros rivals Náxos, and in supply of water and general beauty perhaps surpasses it. The natural vegetation is scanty: oleanders, reeds, and ferns accompany some of the water-courses; a few valonia oaks (*Quercus aegilops*) are found in the Ándros valley, and in the spring numerous wild flowers appear. On the heights the winds permit only stunted phrygana and other scrub to grow, and judged by its mountains Ándros is desolate and bare.

As a whole the island is not fertile, but its possession of fine valleys and the industry and enterprise of its inhabitants redeem it from barrenness. The schists, out of which the valleys are cut, form soft hill-sides often with shelving slopes at their feet, and the slopes and hill-sides teem with springs. Cultivation can thus be carried to high levels, and every advantage which terracing and walling can offer is utilized. The Pétaíon ridge forms a cultural (as well as an ethnological) boundary. North of it cattle-rearing is the main pursuit (though the

Gávreion district is agricultural), while the southern valleys are mainly devoted to fruit and wine production.

The rocky hill-country of the north is suitable for the most part only for pasture, and here cattle, sheep, and goats are kept in considerable numbers. The animals are of a hardy breed, and Ándros work-oxen and mules are noted. Gávreion (and its neighbourhood) is the chief exception and is concerned mainly with agriculture. On the plain itself, which is treeless, partly marshy, and somewhat exposed to cold north winds, are the only meadows in the island, and in its lighter and drier parts onions, grain, and vines do well—Gávreion onions being well known. The hilly coastal regions south-east of Gávreion have numerous olive groves, and at Phéllós (north of Gávreion) are fine orchards and olive gardens. The northern parts of Ándros also produce a fair amount of grain, mostly *smigádi* (mixed wheat and barley); pure barley is also grown and is mostly used as food for the cattle, while pure wheat is grown on Gávreion plain only.

Other than a few hill-side orchards and fields on the west coast, the only areas of cultivation in the southern half of Ándros are the valleys of the capital and of Kóρθιον. These, however, by far excel in value all the rest, and the valley of Ándros is perhaps the most productive area of its size in the Cyclades and has been called 'one of the most fertile valleys in the world'. Here, in the valley-bottoms, where irrigation is possible, are fine gardens, containing fig, orange, lemon, peach, quince, pomegranate, and other fruit-trees. These grow in such profusion that there is often scarcely room for the paths between them, and they stretch high up the hill-sides, where rivulets rush among the groves. The northern slopes of Mt. Pétaion are a veritable forest of lemon-trees, but the southern slopes, both of this and of the Kóρθιον valley, being exposed to the north winds, are less fertile. Lemons are so plentiful that jam is made of the young green fruit, and its jams are a feature of Ándros. On lighter-soiled slopes vines grow; they produce a good-quality light wine. As shelters against the north-east winds cypresses

and bamboo-reeds (cf. Syra) are grown around the gardens, and above the green sea of verdure white villages picked out with cypresses and fine churches appear. The higher slopes and terraces support pulse (beans) and grain, and here too olive and fig-trees thrive, and sometimes these latter are set amidst vines. Higher still the stony hill-sides are marked into patterns by stone walls of rough and curious structure; in the enclosures grain is grown, and after harvest or in fallow times single animals (mostly sheep and pigs) are pastured. The corn grown in this part of Ándros, though not produced in great quantity, is of high quality and in 1867 gained a gold medal at the Paris Exhibition.

Bee-keeping is a flourishing occupation, but the silk industry has now almost disappeared (probably owing to a disease of the silk-worms), and the mulberry-trees have mostly been replaced by lemons.

Industries, Trade, and Shipping

Agriculture, cattle-rearing, and allied pursuits are by far the most important and occupy the bulk of the population. There are deposits of iron-manganese, silver, lead, copper, and zinc ores at Messariá and Chalkolimióna. They are the property of private individuals, but do not seem to be worked energetically, and the output is small. There are ancient iron workings and marble quarries in the north-western part of the island (e. g. near Hágios Pétros north-east of Gávreion), but the iron-manganese mines near Vitáli (in a north-eastern valley) are the only modern enterprise. The mineral resources of Ándros are perhaps worth development (see above, p. 50). Kóρθιον stone-masons, like those of Ténos, have earned a reputation and find work abroad. A certain amount of fishing is carried on off the north-west coast (e.g. at Batsí), and the island has a large seafaring population, Andriot sailors being almost as well known as those of the Northern Sporades and found in every sea. The young women, like those of Ténos, Náxos, and other

islands, are in demand in the cities as domestics, and there is a good deal of emigration.

The island produces annually about 40,000,000–45,000,000 lemons; 10,000,000 oranges; 1,000,000 figs; 330 tons onions; 25,000 bus. grain (nearly all barley); 6 tons pulse; besides olives and other fruits, cattle, sheep, honey, and table-water. Of these nearly all the fruit and vegetables, some pulse, cattle and sheep, and water are exported. The lemon crop alone is worth about £27,000 on the island and must fetch far more in the markets of Athens, Russia, Constantinople, and England, to which it is exported. The grain grown on the island is not sufficient for island needs, and flour has to be imported.

The shipping is concerned only with the island trade—the export of the above products and the import of flour, manufactured and colonial (tea, coffee, sugar, &c.) goods. Owing, however, to the local patriotism of wealthy shipowners, of whom Ándros possesses several, there were registered in 1914 at the port of the capital a fleet of 60 vessels of 113,406 tons in all, or nearly one-fifth of the whole mercantile marine of Greece. Amongst these were 43 cargo vessels of over 1,600 tons, besides 3 transatlantic liners. Practically all these vessels are concerned with foreign (mainly Black Sea) trade and rarely visit the island. The transatlantic boats were designed to compete in the emigration and general trade with the United States and were successfully doing so upon the outbreak of the war in 1914.

Inhabitants

In ancient times Ándros, though its history is obscure, ranked next to Náxos in wealth and importance. Its wealth seems to have been based, as at present, on agriculture, mining and shipping being less important. The west coast of Ándros (cf. in this respect Ténos) was then the most populous; it was nearer and better adapted for the small craft of the times. On the west coast was the ancient capital, and here too are many ancient remains and signs of agriculture

and mining, and Gávreion was the ancient port. At some time Ándros suffered an Albanian invasion, probably from Euboea, but the invaders stopped short at the Pétalon ridge. Its mediaeval history is equally obscure, and it is not known when the centre of population shifted to the east, but probably it happened under the seafaring Venetians. These came about 1207, when the island was captured by Marco Dandolo and was held by Venetian families for over three centuries. To this period belong the numerous strong castle-like towers which are a feature of the island. They were the property of the ruling feudal lords, and were strongholds against the peasantry. The distinction between these classes lasted until recent times, and the word *pheouda* (=feud) still exists in the Kóρθion valley and means an 'estate'. The ancient fortress of the present capital is Venetian, and there are other Venetian fortresses in the eastern parts. In 1556 the Andriots ejected their Latin masters and gave themselves over to the Turks. In the War of Independence the islanders seem first to have held aloof, but later to have massacred all the resident Turks. A characteristic figure of this period is Theóphilos Kaíres who, though he had been abroad (in England and France) since boyhood, returned to share in the struggle. When this was decided he founded an orphanage in his native island, for which project he received liberal support in England. Encountering opposition from the Orthodox clergy on account of his broad-minded views, he relinquished the direction of the orphanage and exiled himself but returned to die in his home in 1853.

The people of Ándros are hospitable, honest, and friendly; sturdy, enterprising, vigorous, and apt to be intolerant. They have more 'character' than most island Greeks and rather resemble the people of the Northern Sporades. They are abstemious and eat little meat; the inhabitants of the northern parts are said to be gloomy and morose, which is partly to be attributed to the severity of their surroundings. The Italian element is now absorbed, and Roman Catholicism is extinct. Ándros is the only island of the Cyclades in

which there is a clear racial division. The northern half of the island (as far as Mt. Pétaion and including the village of Vourkotí) is inhabited by Albanians. Of about 18,000 inhabitants 5,500 are Albanian, the remainder being Greek. Frugal and peaceable, they are no less hospitable than their wealthier southern neighbours; among them the former island garb is still common. Their houses resemble those of the mainland and Euboea rather than those of the islands. They are small, single-storied, built of rough stones without outer dressing or ornamentation, have sloping roofs and generally a mean or dirty appearance. The southern and far more densely populated half of the island is inhabited by Greeks, who live in the larger white stone houses of the Cyclades type. Of such are built the towns of Ándros and Kóρθιον and also, though it is in the north, Gávreion.

Population and Settlement

Ándros differs from most other islands of the Cyclades in that it has its population highly decentralized. Omitting the capital, the average population of the villages is barely 300. This is due largely to the agricultural habits of its people, who settle where soil or pasturage offers advantages, but it is also significant of the sturdier habit of mind of the Andriots. The southern half contains nearly three times as many inhabitants as the northern. In the northern area the villages are mainly pastoral settlements, scattered over the rocky hill-sides. The most important place is Gávreion (pop. 440, P.T.O., C.H.), a comparatively isolated village on the eastern side of a good harbour in the north-west of the island. It is the centre of a fruitful neighbourhood and plain, producing olives, onions, and grain. The village itself is inhabited only by fishermen and tradespeople; trade now passes it by, and its harbour is seldom used. On the neighbouring hills are: Áno Gávreion (pop. 240) to the north-east; Phéllös (pop. 274), a hill-village with orchards and a fine view, to the north-west; Sidónta (pop. 450); and Kallivári (pop. 220). At the head of a watery valley in the Hágioi Saránta

ridge is the semi-ruined settlement Amólchos (Megalochorió), formerly the chief Albanian settlement. Farther north is the mining village of Vitáli. Along the coast from Gávreion are : Batsí (pop. 480, P.T.O.), a fishing village ; Aprovátou (pop. 593) ; and the ancient capital, Palaioúpolis (pop. 253), on a small exposed bay backed by the steep sides of Pétaion. Here are many ancient remains, lost amidst fruit-gardens and rushing springs. Other settlements in this part are Katákoilos (pop. 460), Árne and Balaíoi (pop. together 640) on the northern slopes, and Vourkotí (pop. 420) in the central gorge of the Pétaion ridge.

The most thickly populated part of Ándros is the valley of the capital. Here are numerous small villages and scattered dwellings, buried in rich gardens and set around with cypresses. The total population is about 7,000, the most important villages being Maenites, a 'paradise of verdure and streams', and Messariá, where there are deposits of ore, together having about 1,450 inhabitants. In a north-eastern side-valley near the coast is Steniés (pop. 748).

The capital, **Ándros** (Chóra, Kástro ; pop. 1,870, P.T.O., C.H., gendarmerie head-quarters for the island), is situated partly on a rocky promontory which juts into Ándros bay and partly on the ridge inland from it. The seaward extremity is occupied by a fine old Venetian fortress approached by a drawbridge. Farther in lies the old town, a picturesque place with square red-tiled houses of all colours and decorated with much woodwork. The streets are narrow, marble-paved, and clean. Inland lies the new town with a market-place and houses more scattered. The town is a pleasing variation upon the usual Cyclades type of square houses and flat roofs. The harbour, though not good, is the chief commercial port of the island and is busy in the season with the export trade of its district. Ándros has an energetic and enterprising population, and many of its men have become famous in the mercantile life of Greece.

Southwards from the capital and on the seaward slopes of Gerakónas are Synetí (pop. 373), near which is the gorge

of the Gialiá brook spanned by a bridge, and Vouní (pop. 250).

The Kóρθιον valley is the most southerly settled district, and is second in importance and population to that of Ándros. It contains numerous villages with about 4,400 people in all, with Kóρθιον (pop. 500, P.T.O., C.H.) as centre. Situated in a position similar to that of Ándros, only farther inland, the town consists of white houses built closely in a long line parallel to the shore. It has some large storehouses, and in the valley, farther up, are fine private residences owned by wealthy and ancient families. The sand, which threatened to engulf the whole valley, has been stopped by the cypresses and other rows of trees. The harbour is somewhat better than that of Ándros; the Greek island steamers call, and several millions of lemons, olives, and about 1,000 tons of iron-manganese ore are exported from here annually. Kochýlou (pop. 523) is the largest village of the district. On the slopes of the mountains are several large monasteries.

Harbours

The position of Ándros athwart the prevailing winds—north-easterly in summer, south-westerly in winter—renders what harbours it has more or less insecure. Even Gávreion bay, sheltered from these winds, is liable to sudden land-squalls which sweep down from the northern hills.

Ándros harbour, owing largely to the importance of the town itself, is the most used. There are two anchorages, one on each side (north and south) of the rocky promontory on which the town stands. Port Kástro, that on the south, is more exposed and less used. It is about 4 cables deep, $2\frac{1}{2}$ cables wide, with depths of 4–12 fathoms. The northern bay has been made secure for coasting vessels by a pier 200 yds. long. This covers water of only 4–5 fathoms, but in the middle of the bay are 10–12 fathoms. Vessels up to 6,000 tons can enter the port. There are no wharves or cranes, loading and unloading being done by large boats, limit 100 tons a day.

The best harbour, but now little used, is Gávreion bay. Shaped like a sack with entrance $2\frac{1}{2}$ cables wide pointing south and guarded by bluffs, the round inner bay is 7 cables deep, carries from 13 fathoms at the entrance to 3 fathoms at a cable from its head. It terminates in a sandy beach, and is quite sheltered from the south-west, the fronting islets breaking the swell. Vessels up to 6,000 tons can enter; there are no wharves or cranes, but large boats are available for loading (up to 100 tons a day). Food and water can be had in the neighbourhood, but owing to land-squalls the port is unsuitable for sailing vessels.

Eastward from Gávreion harbour the coast consists of shingle beaches between rocky capes. These bays are open to the south but sheltered by fronting islets (called Gavreionésia) and afford good anchorage. The best of these is in 17-20 fathoms between Megálo islet and Phoúrnos bay. Supplies can be obtained from Gávreion and water by sinking a well in the shore plain or in a neighbouring ravine.

Kóρθion bay is $1\frac{1}{2}$ mile wide at its entrance, $\frac{1}{2}$ mile at its head, and $1\frac{1}{2}$ mile deep. It is more sheltered from the north-east than Ándros bay and has about 15 fathoms. Kóρθion harbour, at the head of which stand the Kóρθion storehouses, has $2\frac{1}{2}$ -3 fathoms and can accommodate vessels up to 1,600 tons, loading being done by boats (up to 80 tons a day).

On the north-west coast is Batsí, open to the south-west but able to take vessels up to 600 tons. South of this is the small fishing-place Chalkolimióna with depth up to 3 fathoms and two fishing boats for discharging cargo. It was to this place that the overland road from the capital was projected (see below).

Communications

A service of Greek island steamers connects Ándros with Syra, Ténos, and the mainland. These boats call 3 times a week at the port of the capital and twice a week at Kóρθion. A local service connects the harbours of the island and carries

mail between them, Ténos, and Lávrión (in Attica). An English company caters for the trade with Constantinople, the Asia Minor coast, and Crete, and communication by means of sailing vessels with the mainland (north-east Attic coast) and Euboea is frequent. The cable from the mainland comes via Euboea. Passing through Gávreion and Batsí to the capital it proceeds to Kóρθion and on to Ténos. There is also telephonic communication between Ándros and Gávreion, between Ándros, Ténos, and Syra, and between Batsí and Gávreion.

The great cross-ridges are serious obstacles to intercourse, and the various settled areas of the island are comparatively isolated from each other. The chief communications with the west coast lead up the valleys and over the lower saddles in the main ridge. There is only one road of 3 miles, from the capital to Maenítes; it is part of a road projected to join the Ándros valley with Chalkolimióna on the west coast, thus saving an extra sea-journey for passengers from the mainland.

Internal traffic is mainly by asses and mules—which are plentiful—over tracks. These tracks are usually rough and arduous, often becoming a series of marble-paved steps up mountain-sides, good for mules but exhausting for pedestrians. They are dangerous in wet weather. For the most part they converge from the north and north-east on Gávreion, whence a route proceeds south-east along the coast as far as Batsí. Climbing the Pétalon ridge by way of Kryonéri spring close under Mt. Kouvára (alt. about 3,000 ft.), this track slopes down and finally drops steeply with steps to Ándros. Thence tracks lead south-west and south-east; the latter crossing the seaward spurs of Gerakónas and the Dipótama gorge by a bridge, and leaving a massive ruin on a marble-topped table-mountain on its right, descends to Kóρθion. From Kóρθion a track leads to Stenó Strait, where a ferry-boat can be obtained to Ténos. Inland transport is by means of asses and mules, there being about 1,000 of the former and 100 of the latter in the island.

TÉNOS

Area : 79 square miles. (Length : 15 miles. Breadth at south-eastern end : 7 miles.)

Population : in 1907, 11,634. (In 1896 it was 12,314.) Population per square mile : 147.

Products : figs, beans, peas, cheese, wine, sausages, lambs, eggs. Marble is quarried by the British company, Grecian Marbles (Marmor), Ltd.

Religion : there is a Roman Catholic as well as a Greek Orthodox bishopric. In the capital is the famous shrine of the Evangelistria.

Physical Features

Ténos, one of the best-known and in some respects most interesting of the Cyclades, is neither a large nor a particularly fertile island. Shaped like a pear with its thin end pointing north-west, its general outline is clear and unbroken, and its structure, as might be expected, closely resembles that of Ándros, though on a smaller and simpler scale. Its only important bays—those of Pánormos, Kolymvéthra, and Liváda—are on the north-east coast, there being besides only the usual ragged indentations. The main Ándros ridge, interrupted only by its brief submersion at Stenó Strait, continues south-east along the length of Ténos, lower as a whole but rising somewhat towards the south. Thus, while in the northern part the highest point is Polémou Kámpos, alt. 2,132 ft., the Tsikiniás ridge in the extreme south-east is about 2,300 ft. The main valleys, though small, lie behind the above-mentioned bays and correspond at their heads to dips or saddles in the main watershed. The lowest of these dips, Hágia Marína (alt. 666 ft.), is about the centre of the island and forms with the Kolymvéthra valley on the north-east and a smaller valley on the south-west a depression which divides Ténos practically into halves.

This fact is recognized in the local nomenclature. The north-western portion, triangular in shape, is called the Éxo Mére, and is an irregular and desolate hill-country, lower towards the north-west (where it is called Mamádos) and rising near its south-eastern base to Polémou Kámpos (alt. 2,132 ft.). In the Éxo Mére the watershed lies fairly

near the west coast and shelves down on its northern flank to blunt promontories on the north-east coast.

The Áno Mére, which forms most of the south-east of the island, is mainly a massive domed plateau (alt. 950–1,450 ft.) with an irregular surface and sloping sides. It is conspicuous by reason of Exópyrgo, a great semi-conical granite mass which rises nearly 500 ft. above its western corner. From this mass the Liváda gorge cleaves apart the craggy Tsikiniás ridge (alt. 2,247 ft.), which stands out clear and sharp at the extreme eastern corner.

The Kolymvéthra valley (also called Liváda) is noteworthy, being the largest on the island. It is surrounded by soft spurs, and forms a nearly circular depression, into whose marshy bottom converge a radial system of streamlets, the whole being called by the inhabitants Káto Mére.

Ténos as a whole is lower and has a flatter and more rounded appearance than Ándros. It too gives evidence of having once been an elevated tableland, but weathering and rain rather than the erosion of streams have caused an even greater obliteration of original feature than in Ándros. The absence of streams in Ténos is due to the smallness of the island and the central position of its mountain masses but largely also to its geological structure. The valleys abound in springs, but the water-supply of Ténos is in no way comparable to that of Ándros.

Geology

The island consists of three distinguishable groups of rocks. Polémou Kámpo (i.e. the greater part of the Éxo Mére) is composed of mica schist—similar to that of Ándros—with embedded marbles. The marble is partly inferior, but partly also equal in quality to the best Pentelic. It is found and worked mostly in the northern half of the island and especially near Pánormos bay. Amphibolites (characteristically hornblende gneiss), partly serpentinized, enter largely into the composition of Mamádos and of the Áno Mére. The Tsikiniás ridge is a huge mass of serpentine. Lastly granite forms the

bulk of the Áno Mére. Over its surface decomposed granite lies strewn in boulders great and small. The structure of these rocks resembles that of the Attic mountains rather than those of Ándros, and weathering and erosion have gone much further than on that island so that the resisting quality of certain rocks (e.g. the quartzite-schist covering of Polémou Kámpos, the granite peak of Exópyrgo, the serpentine crags of Tsikiniás) has become apparent. Except where the three main valleys are, the dip of the schist layers is mostly parallel to the slopes of the hill-sides so that the streams form few deep valleys, and hence the closed and waterless appearance of the island.

Climate

The climate resembles that of Ándros. The heights are exposed to the same north-eastern trades and are subject at times in summer to accumulations of cloud and mist. The north-east winds here too sweep down in sudden gusts upon the south-west coasts, which are otherwise warm and sheltered. The rainfall is moderate.

Vegetation, Cultivation, and Industries

The steep, stony, and in parts arid nature of the island does not make for fertility. Springs, though plentiful in the valleys, seldom develop into streams useful for irrigation. There are few valleys, and the only considerable one (Liváda) is marshy. Moreover the highlands are exposed and support no forests. In spite of all this Téno is comparatively wealthy : to a surprising extent nature has been corrected and supplemented by human energy and ingenuity. Much of the uplands is fit only for sheep and goats, the hardy plants and scrub affording a scant pasturage. On sunny slopes, particularly at Kardiané on the south-western side of Polémou Kámpos, olives grow well, while vines producing a very fair wine are found on warmer hill-side terraces. Wherever possible, terracing and walling have contained the scanty earth, and on such strips grain and pulse chiefly, together

with a few wind-stunted figs, grow. The most fertile parts are the uplands of the Áno Mére (outside the granite limit) and the Liváda and Pýrgos valleys. In this latter willows accompany the brooks, and there are irrigated and intensively cultivated gardens, where vegetables (including potatoes) and a little tobacco are grown. Ténos garlic was noted in antiquity, but the lemons, once numerous, have fallen off through disease, and the silk industry, though still extant, has much declined. Windmills are frequently employed in arid parts, and to provide the much-needed manure myriads of pigeons are reared, their curious tower-like and often richly ornamented cots being a noted feature of the Ténos hill-sides (cf. Mýkonos and Sípunos). These pigeons often serve for food also, and supplement the usually plentiful supply of lambs, eggs, and other produce. A fair number of horses, mules, and oxen are reared in the island, Ténos mules particularly being noted.

Agricultural prosperity and the absence of attractive harbours discourage seafaring, but quarrying and stone-dressing have become an almost traditional pursuit. It is characteristic that, while other islands have marble superior to that of Ténos, in none have the resources been so persistently or so well utilized. The marble industry has somewhat waned, but the quarries around Pánormos bay were, until the outbreak of the war in 1914, worked by the British firm of Grecian Marbles (Marmor), Ltd., and supplied white and variegated marble slabs, from which tombstones and ornaments are carved. The quarrying was carried out by the firm mentioned on up-to-date lines and with machinery and about 200 workmen. There were in addition several small privately owned quarries worked spasmodically. Ténos masons and builders, with skill acquired in quarrying and building stone walls, go abroad every summer and find employment in the East, returning in winter with their earnings. The girls of the humbler classes go abroad as domestics and cooks (cf. Ándros, Mýkonos, Náxos, &c.), but they often return to marry in the island.

There is not much trade. Small quantities of produce (eggs, cheese, &c.), lambs, vegetables, and wine are sold in the markets of Syra, and marble and a few silk woven fabrics are exported. Flour, grain, manufactured and colonial (tea, coffee, sugar, &c.) goods are imported.

Inhabitants, Population, and Settlement

In spite of comparative infertility and constant emigration Ténos is over-populated. Next to Syra and Théra it is the most densely populated of the Cyclades, averaging 147 per square mile in 1907. This is due partly to the resource and industry of its people, partly to the emigrants who return to their island wealthy or send money to those left behind, but partly also to historical causes. Ténos, in which the Venetian rule maintained itself longer than on any other island (A.D. 1390–1715), enjoyed for centuries comparative quiet, stability, and good government, and hence a large access of population from less happily circumstanced islands. The same causes explain the unusual persistence of Italian types and influence and the strong Roman Catholic element in the island. The Italian language survives only in some proper names, but the handsome features, staid manners, and rather melancholy and musical disposition of the inhabitants—especially of the Káto Mére—betray Italian blood, while the Roman Catholic Church through its enlightened and cultured clergy, at the head of whom is a bishop residing at Xynára near Exópyrgo, foster the spiritual and intellectual life of the island. Their educational institutions are noted throughout Greece—particularly the High School for Girls at Loutrá—and are to be compared with those of Náxos, Syra, and Théra.

The towns and villages reflect the character of the islanders. They exhibit considerable taste and care in building. The houses are of white stone and show Latin influence : they are often of several stories, have balconies, outer flights of stairs, and flat roofs. In some villages (e. g. Kardiané) they are decked with bright flowers and vines. Loose settlements (cf. Ándros) are rare ; even small villages are built townwise.

The houses are so close that the roofs often serve as footpaths ; the streets below are narrow, dark, mostly paved with marble, and often vaulted over. In the villages the people live mostly on the house-tops, resigning the streets to pigs. The churches are unusually fine.

The capital, **Ténos** (pop. 2,620, P.T.O., C.H., gendarmerie head-quarters for Ténos and Mýkonos), is the only town. It occupies a site which is warm, sheltered, and conveniently situated as regards Syra. The ancient capital was in the same place, but in the Middle Ages the population removed to Exópyrgo, which was the Venetian capital. With the return of security the people gradually migrated back to the old site, leaving Exópyrgo a semi-deserted but impressive ruin. The town overlooks its harbour and is arranged along the slopes between Áno Mére and the shore. It is white, clean, and well built, and makes a distinct impression from the sea with its large orderly houses and fine dominating church approached by an impressive paved avenue and surrounded by an immense caravanserai. This shrine, the Greek Orthodox church of the Evangelistria, is famous throughout Greece for its wonder-working image and relics and played a great part in the cultivation of the spirit of Hellenism both prior to the War of Independence and since. Yearly the object of pilgrimage for thousands of worshippers from all the Greek lands of the Aegean, it brings no small reputation and wealth to the town. The town itself includes some beautiful gardens containing olive, orange, lemon, and palm-trees and is a favourite summer resort of the people of Syra. In the festival season Ténos is the scene of great gaiety ; the townspeople are enlightened and have modern tastes.

Most of the villages are small, but Pýrgos (pop. 1,170, P.T.O., C.H.), a village beautifully situated in a northern valley amid cypresses and orchards, and the centre of the marble industry, and Hystérnia (pop. 630), both in the Áno Mére, may be mentioned. These, with Phalatádos (pop. 600), are the only villages with more than 500 inhabitants. The average population of the villages is only 244, which is due

largely to the smallness of the cultivable areas and the absence of valleys and harbours. The population as a whole lies on the south-western or warmer side, and Ténos has a general westerly aspect (contrast Ándros, which faces north-east). Most of the villages lie on the western side of the Áno Mére ; some are ranged round the Káto Mére, and a few are strewn along the western face of the main ridge, showing up from a distance as white patches amongst their grey-green olive groves.

Harbours

There are no good ports ; Ténos harbour is the most used for ordinary traffic, and the bays to the north-east for the export of marble.

Ténos harbour has high ground to the north and east, but is liable to sudden land-squalls from the north and is unsafe for sailing vessels. The anchorage for steamers is small and enclosed by two stone breakwaters, between which is an entrance not quite a cable wide. The depth inside varies from $1\frac{1}{2}$ to 5 fathoms, but the space over 3 fathoms in depth is only a cable in diameter. The harbour is faced for 300–400 yards by a fine stone quay, but this can be approached only by boats and lighters of fairly light draught, which are the only means of debarkation.

The mole at Stavró bay on the south-west offers only limited occupation to small vessels, the holding-ground being quite insecure in heavy weather. Eastward of Cape Akrotéri, in Nikolo bay is an anchorage in 10–14 fathoms : it is a convenient haven in a northerly gale. Similarly Cape Ioánnes at the extreme south-east of Ténos affords shelter from north-eastern and north-western gales, but sudden squalls from the mountain-sides make it useless for sailing vessels. Most of the bays on the north-east coast are exposed to north winds, but Pánormos bay, which is sheltered by Planítes Island, is secure. It can, however, accommodate only small vessels. The marble quarries in the vicinity have in connexion with them storehouses, two small jetties, and some loading

facilities. The same applies to the open coves on the north, where the British company (Grecian Marbles (Marmor), Ltd.) loads its marble. They are unsafe in northerly gales. In the western cove is a small stone jetty, with some loading appliances, workshops, and machinery.

Communications

A regular service of Greek steamships, calling at the capital, connects Ténos with the mainland (via Syra), Ándros, and Mýkonos five times a week. In summer numerous smaller vessels convey pleasure-seekers between Syra and Ténos on Sundays and holidays. The telegraphic cable from Ándros lands at Stenó Strait, and leaves the island west of the capital for Syra. A line also goes to Mýkonos, while within the island Pýrgos and Hystérnia are connected with the capital. Telephone communication exists between the capital and Syra and internally between the capital and Stenó, Phalatádos, Loutrá, Kóme, Kardiané, Hystérnia, Platiá, and Pánormos. There are no roads, conveyance being by mules or asses—both plentiful and of good quality—over rough tracks.

MÝKONOS

Area : 34 square miles. (Length (N.-S.) : about 6 miles. Maximum breadth (E.-W.) : about $7\frac{1}{2}$ miles.)

Population : in 1907 (with Délos and Reneía), 4,589. (In 1896 it was 4,403.) Population per square mile : 135.

Products : barley, beans, potatoes, onions, lambs, iron manganese.

Physical Features and Geology

The great mountain-chain which, stretching through three islands and surviving three sea-gaps, finally appears in Mýkonos leaves here no more than its broad rough granite crest unsubmerged. In shape the island is like a rough isosceles triangle with its apex towards the east truncated or only partly expressed in Dráko Island. It has a large deep inlet (Pánormos bay) in its northern flank and a curious horn-shaped peninsula (Anavoloúsa) attached by a narrow

spit to its south-western corner. Mýkonos shows in its western half the relics of the main longitudinal ridge and in its eastern half the remains of a lateral ridge similar to those of Ándros and Ténos. These features are, however, so submerged that the general appearance of the island is that of a rocky tableland studded with hills, with two points, both called Hágios Elías (altt. 1,194 ft. and 1,138 ft.), at its north-western and eastern corners respectively.

There are no streams and hardly a plain or valley of any size, the island consisting almost entirely of a granite and gneiss plateau with perhaps a stratified group of ferruginous limestone, sandstone, and conglomerate around Pánormos bay. The granite forms low, rounded, and extremely rough and rocky hills, and at lower levels lies disintegrated in the form of boulders or sand. At one place a large seam of heavy spar has been discovered, containing lead and silver ores, and iron manganese exists in workable quantity.

Vegetation, Cultivation, and Industries

The island is destitute of natural vegetation and has a dry and barren appearance ; the water-supply is scanty, and much of the soil is fit only for barley and small live-stock. Agriculture, however, is not neglected, and the cultivators of Mýkonos are as industrious and as ingenious as those of Ténos. Terraces and garden-strips, built up among the granite boulders, mark out the hill-sides in fantastic patterns, and in these strips fig-trees, beans, and barley grow. In the season the barley fledges the rocky outlines of the hills and gives them a quaint bristly appearance. Around the capital and in other more fertile valleys inland there are a few irrigated gardens producing potatoes and a little tobacco and, in lighter and drier parts, beans and onions. Vines thrive on the warm slopes, and a good deal of wine is made, but there are few olives. The light gritty soil of Mýkonos (as well as of Délos and Reneía) is particularly suited to barley, and a good deal is grown and exported to neighbouring islands. It is often ground on the island, there being 25 mills. The barley-hay

serves as fodder for mules and asses, which are plentiful and of good quality. On the uplands sheep and lambs are pastured, and Mýkonos has a great many poultry and pigeons (cf. Ténos).

The agricultural production (including also Renéa and Délos) is estimated roughly at: barley, 20,000 bushels; beans, 84,000 lb.; potatoes, 14,000 lb.; onions, 22,400 lb.

The poorness and small amount of cultivable soil drive many of the islanders to sea. The island possesses numerous (20–30) sailing craft for its size, and this side of the island character is curiously revealed in the 300 or more shrines erected about the island mostly by mariners in fulfilment of vows.

A certain amount of mining is carried on in normal times. The French Lávrión Co. had workings which produced in 1914 about 2,750 tons of iron-manganese ore. The silver-lead deposits were also worked by a French company. The output amounted at one time to 30,000–40,000 tons of ore rich in silver, and in 1912 a net profit was made of over £1,100. But the good ore seems largely to have been worked out, and operations have now been abandoned.

Population and Settlement : Harbours

There is only one village of any size in the interior, Áno Meriá (pop. 1,272)—and this is a loose group or settlement rather than a village proper—but single farm-dwellings are scattered all over the island (cf. Kéos). The capital, Mýkonos (pop. 3,200, P.T.O., C.H.), is situated on the central west coast and stands on a small bay formed by an indentation in the coast of the broad bay of Toúrla. Backed by low granite hills, which are carefully cultivated and set with numerous windmills, it is a prosperous and well-built town. Its broad granite promenade built up along the harbour, square Italian-looking houses, high-walled gardens, Venetian remains, blue bay and sunshine give it quite an Italian air. The Italian influence remains strong, and the general culture and intelligence of the inhabitants are high. Mýkonos

girls are known for their good looks and make the beautiful and famed Mýkonos lace, while those of the humbler classes go abroad as domestics (cf. Náxos, Ándros, &c.).

The small bay on which the capital stands, though shallow inshore and rather exposed to the west, has been improved by a breakwater 200 yds. long, built from a south-western point. At the north-western corner is a slight bluff, and below this is good anchorage in 13-fathom good holding-ground; it is the only safe part when the wind is from the north-west. The beach along the town-front was originally sand and shingle, but it has been built up nearly all round into a solid granite quay with, at one place, a wooden stage for boats and lighters. There are no cranes, landing being done entirely by boats. There are no other good havens on the island, though Pánormos bay is sheltered from the south-west.

Communications

A bi-weekly service of Greek steamers connects the capital with Syra and the mainland via Ténos. A telegraphic cable connects the capital with Syra (through Ténos), and a telephone cable runs to Délos via Reneía. Inland communication is entirely over rough hilly tracks by mules and asses.

RENEÍA (MEGÁLE DÉLOS) AND DÉLOS (MIKRÁ DÉLOS)

These two islands—sometimes called Greater and Lesser Délos respectively—lie with their numerous surrounding rocks and reefs close together south-west of Mýkonos and separated from it by a strait $1\frac{1}{4}$ mile broad and 27 fathoms deep. They belong physically and economically to that island.

Délos (Mikrá Délos)

Area : about $1\frac{1}{2}$ square mile.

Population : 45.

Délos, which lies nearer to Mýkonos, is a rocky ridge of irregular outline running north and south, 3 miles long and

$\frac{3}{4}$ mile broad at its widest, stretching along the south-east flank of Reneía, from which it is divided by a sound only 547 yds. wide at its narrowest part. At this point are two islets (Megále and Mikrá Revmatiá) which leave narrow passages on either side of them, that on the east, towards Délos, being navigable only by quite small craft (10 ft. draught), that on the west, towards Reneía, of 5 fathoms being used by merchant vessels. In a north wind the current in this sound is dangerous, but just at its northern entrance is an anchorage good in other weathers.

The island is girdled by low but steep cliffs, and, except for one peak of 360 ft. (Kýnthos) near the middle, the surface has only gentle undulations. There are no valleys, but a depression south of Kýnthos artificially deepened and curbed is the site of the ancient sacred lake of Délos. The granite and gneiss rocks are everywhere exposed, but a little earth has collected here and there. The island is intersected by stone walls (cf. Ándros, Kéos, &c.), and the fertile patches are used by the people of Mýkonos for corn or pasture.

In antiquity Délos was one of the most famous islands in the Aegean. In Athenian days the traditional birth-place of Apollo and a centre of Apollo-worship, it became under the Roman Empire a great slave-market and retained even in the Middle Ages some of its prosperity. This has now vanished, and nothing remains but a few shattered ruins, the only inhabitants being an official or two and a few cultivators and herdsmen from Mýkonos.

Reneía (Megále Délos)

Area: $6\frac{1}{2}$ square miles. (Length: $4\frac{1}{4}$ miles. Maximum breadth: 2 miles.)
Population: 70.

A double island, united by a narrow rocky isthmus, Reneía is ragged and of irregular shape. Its bays on all sides afford in turn protection from any and every wind, though no one is safe in all weathers. Similar in physical features to Mýkonos and Délos, its low undulating granite and gneiss hills attain a height of 490 ft. in the north. The surface is treeless, inter-

sected with stone walls, and cultivated here and there with crops and a few vines. Like Délos the island belongs to the people of Mýkonos and is inhabited only by a few cultivators and shepherds. On Reneía is a lazaretto, the quarantine station for Syra, with which it is in telephonic connexion through Mýkonos. The only other ordinary means of communication is by sailing boat with Mýkonos or Syra, but in ordinary times these islands (especially Délos) are visited by steamers carrying tourists and pleasure parties.

ISLETS AND ROCKS OF THIS SERIES

Six miles south-east of Mýkonos are the rocks known as Stapódia, which served ancient mariners as a pointer to the east. East of Délos is Práso islet. Both are quite unimportant. •

(B) NORTHERN CENTRAL SERIES

(GIOÚRA, SYRA)

These two islands, parallel to and 10–12 miles from the North-Eastern Series, are united with them by the 100-fathom platform, Gióúra only by a neck running south-east, it otherwise being surrounded at short distance by deep sea. In climate and geological composition they reveal their affinity with the other northern Cyclades to the north-east and west of them, but they have also distinguishing characteristics. Though the series comprises but one island—for Gióúra is in most respects negligible—that island is economically the most important in the Cyclades and was until recently one of the notable islands of the Mediterranean. Syra is not only agriculturally productive but its capital was and still is in some degree an industrial and commercial centre of importance in Greek and Levantine trade, and its merchants and shippers have earned a reputation for sagacity and enterprise.

GIOÚRA

Area : $6\frac{1}{2}$ square miles.

Population : in 1896, 18.

Products : sheep and goats; onions.

Gioúra, anciently a Roman penal settlement, is a roughly triangular rock with sides steep (especially on the south) and devoid of inlets. Its maximum elevation is in the middle (980 ft.), and it is prolonged towards the south-east by an island rock named Glaronési. Geologically it is crystalline limestone with quartz seams. Rocky, desolate, destitute of water and vegetation except brushwood and oleanders, its only inhabitants are a few shepherds and labourers, mostly in the service of Syra landowners. The minute coves on the east coast have a little soil at their head, and here are grown onions, which are sent to Syra, while sheep and goats subsist on the uplands. Fishermen from the fishing-grounds between Gioúra and Syra frequent its coasts, and this, coupled with its lonely wildness and its convenience on the caïque route from Syra to the mainland, has perhaps earned it its name as a smuggling resort.

SYRA

Area : 31 square miles. (Length : $9\frac{1}{2}$ miles. Breadth at south end : $5\frac{1}{2}$ miles.)

Population : in 1907, 27,350. (In 1896 it was 27,759.) Population per square mile : 882.

Products : chiefly vegetables. The exports are chiefly manufactured goods from Syra town, especially cotton goods and leather. The chief source of prosperity is trade and shipping.

Physical Features

Syra, though neither fertile or rich in minerals nor beautiful, is the best-known, wealthiest, and most densely populated of the Cyclades. This is due largely to its central position and its convenience as a place of call on important sea-routes.

The island has the shape of an irregular triangle with its apex pointing north, but it can be better described as a thick crescent, convex towards the east, set on a roughly oblong block at its south-east. At the junction of these two figures

are the two chief bays, Syra harbour on the east and Poseidonía bay with its branch, Phoínika bay, on the south-west. Besides these there are Váre bay on the south and the bays of Kíni and Galessá on the west, and the whole north-west coast is extremely ragged.

The character of the interior and its economic value are determined by the distribution of the hills. These are much higher and more rugged in the north, rising in one place (Mt. Pýrgos north-west of the capital) to nearly 1,500 ft. They sink as they proceed south and lie more to the west, leaving the central and south-east portions free from great heights. This suggests the division of the island into three areas, with distinct physical and economic features. The northern part of the island (Áno Meriá) is an area of savage and barren hills, often striking in colour and form, arranged around a longitudinal ridge. This ridge falls steeply, often precipitously, to the north-east coast, but on the west it is gentler and terminates laterally in numerous rugged promontories enclosing bays and coves. Southward the hills, though still high, broaden and flatten, are cut into by deep valleys, and make room for several fair-sized depressions (e.g. those of Kíni and Galessá). This area, occupying the middle part of the island and known as Messariá, is the transition to the third or southern section, a region of low rolling hills with broad soft valleys and some small alluvial plains, notably that opening on the south-west of Syra harbour (called Livádia), and those above Váre and Poseidonía bays. In the south-west corner, however, is an isolated and barren ridge (Nétes), which with a similar isolated mass north-west of it frames about Poseidonía bay and forms a sharp promontory at the south-west.

The coast is rock-bound everywhere except for a few sandy beaches in the bays. The water-supply is poor. There are several good springs in the island, and wells, sometimes brackish, supply water to the gardens. The water-supply of the capital is deficient : it relies mainly upon a spring (Sýringas) in the northern hills, whence the water is brought laboriously on mules. The rain-water, caught in cisterns and on roofs, though

also used, is often polluted and rarely lasts out the summer. In periods of drought water has to be imported from other islands, and Sárizes water from Ándros is in requisition.

Geology

The geological formation is confused but fairly uniform, two stratified groups predominating. The lower is composed of hornblende and epidote schists, which appear in great variety, sometimes compressed and sometimes crystalline. The upper group consists of complexes of limestone in great masses, the limestone often taking the form of impure marble, dense and bluish and often containing iron. The schists of Syra exhibit the most striking and beautiful variations of colour and are well known on that account. The tableland which originally formed the island has been transformed by weathering and erosion, leaving the more durable limestone to form the higher levels (e.g. Áno Meriá and Nétes ridge). The lower hills of the south-west and the rich valleys have been washed out of the softer schists.

Climate

The climate is healthy, extremes of heat and cold being rare and snow practically unknown. In winter colder winds from the north-east alternate with warm and rather sickly spells of southerly winds. The rainfall, though variable, is usually sufficient for cultivation and is sometimes torrential. The heat in summer is apt to be sultry in the valleys but is usually tempered by north-east winds. The town of Syra, taken as a whole, is unfortunately situated : it is shut in, hot, and close. The higher parts are better, and there is a general exodus of the wealthier classes in summer to country and seaside resorts and even to other islands.

Vegetation and Cultivation

The island has practically no natural vegetation, except scanty heath on some of the hills, many of which, however, are quite bare.

The Áno Meriá, mostly barren marble heights, support a few sheep and goats, the latter supplying some milk and cheese to the capital. Cultivation is practically confined to the two southern sections, where the physical features are gentler and the water-supply fairly abundant. The most fertile part is the hill-country of the south. In the valleys of this district are intensively cultivated market-gardens producing vegetables (peas, beans, tomatoes, cucumbers, egg-plants, *bahmias*, &c.) in considerable quantities.

In the Messariá cultivation, though profitable, is more arduous. The deeper valleys and hollows admit a little intensive cultivation, but the stony hill-sides have to be walled up and terraced. On the sunny hill-sides a few olives and figs thrive, the latter with corn occupying the narrow rocky terraces. The common island mixture of barley and wheat is the usual sowing, but in poorer parts pure barley is grown. On the lower and richer slopes, both in Messariá and the south part of the island, vines prosper, and a few goats, sheep, and mules are raised. A feature of Syra market-gardens are the tall hedges of bamboo-reeds used as shelters. These enable vegetables to be ready for the early markets and are thus of great importance. The canes are imported from Náxos (see pp. 118, 141) and take root when set so that a Syra valley often looks like a bamboo forest.

Industries, Trade, and Shipping

Other than the mining referred to below, the industries, trade, and shipping are entirely concentrated in the capital and have little relation to the life of the rest of the island, which is concerned chiefly with agriculture. The industries and trade of the capital are dealt with below (see pp. 81, 82).

A little mining has been done from time to time. Iron mines, now abandoned, are situated in a valley $1\frac{1}{2}$ mile north of the town along the Vapória road. There is a light railway (perhaps capable of repair) from the workings down to the water's edge, where vessels can lie alongside. Near Kíni there are small private-owned iron and copper mines, not

regularly worked. A small talc mine is said to be working, besides several quarries for building-stone and road-metal. The output, even when the iron mines were working, was small (about 3,000 tons yearly), and this has now largely fallen off.

Population and Settlement

The population of the island falls more clearly into classes than does that of most islands. There are townsmen, countrymen, and persons whose living is the harbour and the sea. Besides a good deal of fishing done to the south-east and north-west of Syra, the port of the capital with its traffic keeps a number of men continually engaged. The countrymen of Syra are industrious and shrewd. They usually occupy their own land, and their dwellings are scattered over the fertile parts of the island. The townspeople are mostly traders and dealers, artisans, and professional men. The merchants of Syra have a reputation for enterprise and capacity; there are said to be many millionaires in proportion to the size of the city, and during the war many fortunes were made by shipping ventures. The Italian element has been absorbed, but the Roman Catholic element is strong. The town contains many residents from abroad; its people are more enlightened than those of most of the island towns, but there are many extremely poor. A great deal of the labour employed in Syra is drawn from other islands, and in times of depression these people suffer great privations.

There are no villages in the north part of the island. Messariá, Kíni, Págos (pop. 663), and Galessá (pop. 307) are situated in hollows and are the centres of agricultural areas. In the south are: Váre (pop. 784) on its bay; Chroúsa (pop. 434) on the edge of a plateau amidst olive-clad hills, overlooking a fertile valley and the sea; and Dellagrázia (pop. 571) on Poseidonía bay, surrounded by gardens and fields. The two latter are favourite summer resorts of wealthy Syriots, and these as well as Parakopé and the hill-village Mánná are all reached by the main road from Syra. Note-

worthy is Episkopé, a village high above Syra in a beautiful site, with gardens and a running brook, and reached by a steep but good road. In all these places are fine houses with gardens, in the Greek style, which offer a welcome relief from the heat and smells of the capital.

The Capital

Syra (officially known as **Hermóúpolis** ; pop., with Áno Síros, 23,808, P.T.O., C.H.) is the capital of the island and of the *nomós* of the Cyclades. It is one of the chief commercial ports of Greece, an industrial centre, and in population ranks fifth amongst the towns of Old Greece.

History.—Practically unknown in antiquity, the island was selected by the Roman Catholic Church in the Venetian days as a centre for missionary propaganda, and a Capuchin monastery was built on the top of the hill of Áno Síros, around which grew up a settlement. As a protection against pirates this colony placed itself under the French flag of Louis XIII, but it remained quite small till the end of the eighteenth century. In the War of Independence 40,000 refugees from the Turkish massacres of Chíos, Psará, and other Asiatic settlements came first to Ténos and later, after being refused by Kéos, in 1821 colonized Syra. The colonists were enterprising traders and settled in the low ground around the harbour and, though they maintained neutrality under the French flag—an act which won them unpopularity—they laid the foundations of modern Greek trade and of Syra. In 1825 the town was officially named Hermóúpolis by Luke Ralli ; the Chian colonists remained ; the best elements of Áno Síros were attracted to the new town now growing up on fine European lines, and by 1835, freed from fear of Turks and pirates, it had become in virtue of its position a thriving port whose prosperity increased up to the rise of Piræus. In the Greco-Turkish war (1897) Syra was bombarded by the *Hamidieh* of the Turkish fleet, the object apparently being to blow up the powder-magazine.

The Town.—Situated on a good harbour the town of Syra

presents from the anchorage a striking appearance. It is ranged round and rather to the north of a bay on the narrow fringe of low ground between the shore and the bare hills behind, and mounts the slopes, which culminate steeply in two conical hills. The square box-like houses crowd on top of each other, and are tinted in many pale shades and have Venetian shutters. One hill is crowned with a fine church, and on the higher (Áno Síros) are massive Venetian remains. The lower town has many marble buildings, the public square has an imposing town hall, and there are several fine churches. The better-class residential parts stretch northwards along the cliff known as Vapória, where is the favourite promenade. The streets are fairly clean, but the absence of sanitation, the overcrowding of houses and population—especially in Áno Síros—and the industrial life of factory and quay tend to make Syra unhealthy. The water-supply is insufficient; consumption is prevalent, and the inhabitants have an unhealthy appearance.

The business part of the town lies behind the quays at the head of the harbour; to the east is a narrow promontory extended by a mole. Here are the custom-house, post and telegraph office, Government emery dépôt and emery-crushing works. The south part of the town contains most of the factories, shipbuilding and repairing yards, and mills. Áno Síros covers the face of the sharply conical hill north-east of the town, from which it is separated by a dry ravine spanned by a massive stone bridge. It is approached by a road from the south and by a huge flight of steps from the front. It is crowded, dirty, and unhealthy, and occupied almost exclusively by Roman Catholics.

Syra is the administrative centre of the Cyclades. Here are: the seat of the *nomárchos* and his staff; the chief harbour authority; audit department; custom-house; treasury; post and telegraph office; and head-quarters of gendarmerie for the Cyclades. Here also are the head offices of the *nomós* for the Government monopolies (Náxos emery, tobacco, and salt). There are a court of appeal, a court of first instance and minor



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courts, and a public prosecutor. A Greek Orthodox and a Roman Catholic archbishop have their seats here, besides a number of the clergy of both denominations. There are good primary and secondary schools (Greek and Roman Catholic); 2 hospitals (one kept by French nuns); almshouses and other charitable institutions; prisons. Consuls and consular-agents of all the Great Powers and a considerable number of foreign business men, including a Lloyd's agent, are resident. There are a Chamber of Commerce and branches of four large Greek (Athens) banks, besides four small local ones. The quarantine station for Syra is on Reneia Island and is connected by telephone with the town. The powder-magazine is not now used.

Industries.—The industrial activity is noteworthy: the chief occupations are tanning and manufacturing cotton yarns. There are 13 tanneries, 6 of them fair-sized, employing about 300 men in all, though owing to competition elsewhere this industry has declined. There are 12 spinning and cotton-weaving mills, some with dye-sheds attached. These, with allied industries, employ about 3,000 persons (mostly women and girls) and consume 1,200–1,500 tons of raw cotton annually. The fabrics manufactured are mainly of the rough and simple kind in demand in Greece and the islands. There are also 1 large flour-mill and 1 grist mill; 3 engineering and ship-repairing works (see below); besides a number of smaller concerns (such as bakeries; ice-works; distilleries; a Government tobacco-cutting establishment; linseed oil, macaroni, glass, soap, candle, shot, starch and glucose-factories, and furniture works), while the manufacture of sweetmeats (*loukoúmi*, 'Turkish delight') is an important industry, these sweets being in great demand throughout Greece. The gunpowder-factory, owned by a private company, was equipped (before the war) with up-to-date machinery and was capable of an output of 1 ton a day, but it has been closed for some years past. It is situated 6 miles from Syra. The packing and re-export of citrons, normally done in Syra, have been discontinued during the war. For mining see p. 77. Náxos emery passes

through Syra, where it is inspected and sorted for export, inferior ore being cast aside. There are also small emery-crushing works, and in 1914 38 tons of ground emery were exported, though such export is not usual. The town is supplied with light and the telegraph station with power by an electric power station.

Shipbuilding and repairing employ 200–300 men. Wooden craft up to about 300 tons can be constructed, but the type most commonly built are sailing vessels of 20–40 tons, for which the wood is imported from Vólo and Constantinople. The output averages 15 vessels (amounting to 500 tons) yearly. There are facilities for repairing on a fairly large scale. These works belong to the *Compagnie des Forges et Chantiers de Syra*, who undertake repairs upon hulls and machinery under the supervision of a Lloyd's surveyor. There are two hydraulic slips, one capable of taking vessels up to 2,500 tons and the other up to 600 tons. In 1914 34 vessels were taken on the two slips, and repairs were executed on 59 others besides. During the war these works were reorganized and did most useful work.

British coal (private or Government stores) is usually kept in stock in fair quantities. Syra was formerly the principal bunkering station in these waters, but since the rise of Piræus and the development of this trade at Kéos Syra's coaling has fallen off by about 80 per cent.

Trade and Shipping.—Syra owed its rise to its situation : it was a convenient port of call for eastward-bound vessels and also a convenient distributing centre for southern Greece, the Cyclades, and most Aegean trade. It consequently developed a considerable entrepôt trade. But with the rise of Athens and Piræus to commercial importance Syra has lost a great part of its foreign trade, while Kéos has helped to rob it of its bunkering trade. But it is still and will no doubt always remain the collecting and distributing centre for the Cyclades, though there is a tendency for even their more important foreign trade now to pass it by.

The foreign trade of Syra amounts to about £390,000 per

annum, of which £72,000 are exports and £318,000 imports. The chief exports to foreign countries are: Náxos emery (averaging 8,000 tons annually, valued at £30,000–£40,000), which goes mainly to Europe (England, Holland, &c.) and the United States (during the war the value of the emery exports was nearly trebled); iron ores from Séríphos, Síphnos, and Kýthnos (160,000–200,000 tons annually, value £30,000–£40,000); in addition vegetables and sweetmeats. The decline of the bunkering business and of the export of citrons in brine—the latter formerly valued as £5,000–£6,000 annually—has been referred to above. The exports go chiefly to Malta, France, United States, United Kingdom, Austria-Hungary, and Germany.

Syra imports from abroad: coal (75,000–100,000 tons annually), mostly from the United Kingdom; grain from India and the United Kingdom; raw cotton from America and also from Cyprus, Turkey, and mainland Greece; valonia and pine-bark for tanning; sugar; fish (particularly Yarmouth dried fish and Newfoundland cod); hides; wood (for building purposes); raw iron; manufactured goods and clothing; machinery; rice, &c. About 50 per cent. of these imports come from the United Kingdom, and India supplies goods (rice, leather, indigo, bags, &c.) worth £20,000. The remainder come chiefly from Austria-Hungary, France, and the United States.

Distinct from the above-mentioned and chiefly entrepôt trade and not reckoned in it is what may be termed Syra's own trade, i.e. trade connected chiefly with her own products, industries, and needs. Part of this is foreign, but the greater part is with other parts of Greece only, and reliable statistics are therefore lacking. She imports from the mainland raw cotton and tobacco, and exports to Greece and the islands cut tobacco, macaroni, sweetmeats (*loukoúmi*), textiles, and dressed leather, though the export of this last is declining (see above). Syra vegetables, chiefly tomatoes and egg-plant, are exported to Athens, Constantinople, Alexandria, Marseilles, and Trieste in time for the early markets, and the value of this

export is estimated at £50,000 annually. In addition Syra absorbs for her own consumption a fair part of the surplus agricultural produce (fruit, vegetables, cattle, cheese, honey, wine, eggs, &c.) of the neighbouring islands and of Náxos and Páros, and in return she re-exports to most of the islands their manufactured and colonial (tea, coffee, sugar, &c.) goods.

Syra's annual foreign trade is borne in about 1,000 steamers of all nationalities, averaging 900,000 tons in all. Of these 70–80 per cent. are Greek; 7 per cent. (representing over 100,000 tons) are British; Austro-Hungarian and Italian coming next. The local (Greek) trade of the same port is carried in 1,000 sailing vessels, averaging 18,000 tons in all (90 per cent. Greek and the remainder mostly Italian).

There were registered in 1914 in Syra 93 vessels amounting to 114,878 tons (including 30 cargo vessels over 1,600 tons) or about one-fifth of the whole Greek mercantile marine. During the war several of the best-known Greek shipping companies transferred their head-quarters from Piræus to Syra, where on account of their pro-Entente sympathies they were safe. During the war also several new enterprises were started in Syra, which profited by war conditions, and over £1,000,000 is said to be invested in the shipping industry. Most of the large companies have now returned to Piræus, but there are said to be two lines which make Syra their permanent head-quarters.

Harbours

Syra harbour, though roomy, is somewhat exposed, and damage sometimes occurs to shipping. The islet Gaidaronési off its south-eastern entrance protects it somewhat from that quarter, but sailing vessels experience difficulty in putting out in easterly winds. A long narrow peninsula at the north-eastern corner, prolonged by a mole of large stones 430 yds. long, shelters an area of about 700 sq. yds. (about 400 yds. long). This is the best anchorage and has water of 5–14 fathoms. Vessels of 20-ft. draught can make fast by the stern to the bollards and quays which are found around this

water to the north and east, while large ships anchor farther out. Loading and unloading can thus be done either by lighters, which are available in good number, or direct on to the quays. There are several cranes (including one steam crane), and in the shipbuilding and repairing yards (farther to the south-west) are mechanical appliances (cranes, &c.), but the water in that direction becomes shallow. There is about $\frac{1}{2}$ mile quayage in all, but only about a cable of this has water deep enough for large vessels to come close in, and the peninsula mentioned is faced with buildings (custom-houses, emery dépôt) to the water's edge. There are facilities for coaling (1,500 tons in 24 hrs.) and repairs on a fairly large scale. Vegetables, fruit, and water, and some provisions can be had in the town, but they are not always safe.

Besides this the island possesses no good harbours, though the bays of the west and south (Poseidonía, Váre, &c.) are sheltered from north and north-east winds and are sometimes used by small sailing craft.

Communications

Syra before the war was in daily communication by steamer (Greek island lines) with Piraeus and some one or another of the Cyclades. Vessels could also be found without difficulty bound for most Greek ports and islands. Frequent communication existed with Salonica, the Asiatic islands (Chíos, &c.), and Levantine ports generally by steamer and sailing vessel, but for Crete, Egypt, and Cyprus and farther abroad Piraeus is the more convenient port.

Several submarine cables are landed at Syra, there being communication in this way with Piraeus (Athens; 3 lines), Chíos (2 lines) and Crete (1 line). The main Cyclades cable goes to Páros, which is the centre for all the southern Cyclades, but Syra is also connected telegraphically with the north-eastern islands through Ténos and with the western islands through Sípgnos and Páros. There is telephonic communication with Ténos and internally with Áno Meriá, Áno Sýros, and Váre. The main cable lines are the property of the

Eastern Telegraph Co., which has its office in the same building as the Post Office. The local lines are owned by the Greek Government, but are mostly worked by the company mentioned. There is also a naval wireless station at Syra reserved for Government use and capable of communicating with Salonica, Lémnos, and Ténedos.

There are 12–14 miles of road in the island, and for the rest only mule-tracks, easy in the southern, steeper in the central, difficult in the northern parts.

The Syra–Dellagrázia road (about $7\frac{1}{2}$ miles) goes due south, skirting the harbour, for 1 mile. Bending south-west and again south-east it mounts gentle hills (on the r.). A steep hill and a sharp bend west carry it past Mánnā (l.), and again turning south it slopes up gently to the watershed (alt. 400 ft.). Here (fourth mile-post) a good branch road leads $1\frac{1}{2}$ mile south to Chroúsa, where it abruptly ends. The main road descends west with steep but even gradients for about 1 mile with a ravine to the r. and hills to the l. and then turning south slopes down evenly to the lowlands of Dellagrázia, passing Parakopé at about the sixth mile. The road is broad, well metalled, in good condition, and nowhere too steep for animals or motor traffic provided the loads are not too great. It crosses at least three strong stone bridges besides numerous culverts.

The road to Episkopé branches from the above where it leaves the town (S.) and mounts the steep hills to the west with numerous winds and hairpin bends. Higher up it skirts a ravine (l.) and reaches Episkopé (about 4 miles) at an altitude of about 800 ft.

The road—called Vapória—leading north-east from the capital along the cliff-face is good but steep and only two miles long. At mile $1\frac{1}{2}$ it bends down across a ravine which it crosses by a double bridge. Near by are disused iron mines with a light railway down to the coast, where is a deep landing-place permitting lighters to come alongside. The road climbs the opposite side of the ravine and ends abruptly on a bluff $\frac{1}{2}$ mile farther north.

Donkeys are mostly used for transport, and these are plentiful. There are also in the capital a few horses of poor quality.

ISLETS AND ROCKS OF THIS SERIES

About $1\frac{1}{2}$ mile east-south-east of the entrance to Syra harbour lies the bare Gaidaronési ('Ass's Isle'), on which is a lighthouse. Ships sometimes shelter beneath it in north-eastern or south-western storms. Off the south-east corner of Syra is the deserted Asprónesi ('White Isle') overrun with rabbits, and 4 miles south-east of this is the low sinister-looking rock Náta, which lies near the Syra-Páros route.

(C) NORTH-WESTERN SERIES

(KÉOS, KÝTHNOS, SÉRIPHOS, SÍPHNOS)

These four moderate-sized islands, with Makronési and some smaller islets, form the extension of the Attic promontory towards the south-east. They thus correspond to the North-Eastern Series (Ándros, Ténos, &c., which are the extension of the Euboean ridge) and are roughly parallel with them. They form, however, no such closely linked and related chain, and the sea-intervals between them are broad and deep compared with those of the North-Eastern Series. Geologically also, while Kéos and Kýthnos are akin to Ándros, Síphnos is more closely related to Syra. As regards climate and water-supply Kéos, with its mists and damp heights, resembles Ándros, while Síphnos, the southernmost member of this group, has a mild and moist climate more like that of Mélos and the southern islands. In an economic sense Sériphos, though as infertile and as barren as Kýthnos, is one of the most important islands of the Cyclades, its iron mines being among the most important in Greece. Kéos and Síphnos have, each in their way, importance as agricultural and fruit-producing islands and are for their size wealthy and prosperous. Kýthnos on the other hand is reckoned amongst the poorest of Greek islands.

KÉOS (KÉA, ZEÁ, TZIÁ)

Area : 40 square miles. (Length : $10\frac{1}{2}$ miles. Maximum breadth : $5\frac{3}{4}$ miles.)

Population : in 1907, 3,817. (In 1896 it was 4,975.) Population per square mile : 95.

Products : fruits, valonia, honey, wine. Iron, manganese, lead, and zinc ores exist on the island but are not worked.

Physical Features

Kéos, the largest and most interesting of this series, is shaped curiously like a flint arrow-head with its point directed south-west. Lying east by a little south of the extremity of the Attic peninsula, it is separated from this by a channel about 12 miles broad, the only intervening land being the long rocky ridge of Makronési, which lies north and south close along the Attic coast. This channel, though often rough, is the natural passage for ships from either Piræus or Cape Malea bound north-east through Dóro Channel, and it is much frequented.

The island is a compact and roughly convex tableland ; its coasts are steep, frequently precipitous, and devoid of large harbours. The double bay of Hágios Nikólaos on the north-west is by far the best-known, but those of Otziá (on the north) and Spathí (on the north-east) may be mentioned, the remainder being either open bights (e. g. Koúndouros bay on the south-west) or mere coves. A peculiarity of the Kéos inlets is their invisibility from the sea, due to the narrow, steep, and often oblique nature of the gorges of which they are the outlet as well as to the high and bold cliffs which flank their entrances.

In the interior is a mountain kernel or mass of high ground of roughly the same shape as the coast. One or two ridges and peaks overtop the rest (notably Mt. Prophétes Elías about the centre, alt. 1,867 ft.), and deep ravines have marked it out into a number of rounded ridges. In spite of this the central mass forms a fairly uniform plateau averaging 1,450 ft. in altitude over a great part and, except on the north, extending

with an even slope all round until it falls with convex descents to the sea. For its size the island has well-developed streams and valleys. Deep glens radiate from the central mass in all directions. In the northern part of the island these valleys, with their heads lying close together on the central plateau and their feet in the various bays on the coast, form convenient ways across the island, the passes being broad saddles rather over 1,000 ft. high. At the outlet of the larger valleys are small plains. There are no streams with a constant flow, but springs abound, and water is plentiful even at high levels, where it is held by the oak forests.

Geology

Kéos is composed of the same mica schists—prevailingly green (chlorite)—inlaid with the same inconsiderable layers of inferior marble as Ándros. In one place (east of the capital) the marble seams contain much quartz, which partly lies strewn in débris over the surface, and in two places on the borders of these marble layers iron ore occurs. Over the principal mass of the mica schists lies a thicker covering of marble, in the southern parts of which (Petroússa) lead glance containing silver and iron ore is found. Noteworthy is a small patch of dolomite on a hill south-west of Port Livádi. This, belonging to the chalk system of the Attic hills and found nowhere else in the Cyclades, reveals the connexion of Kéos with those mountains.

The superficial shape of the island is fairly independent of the main geological structure, but the north and east coasts follow closely the dip of upper marble, and the main valleys, and consequently the ridges, have been formed by erosion along the trend of the schists in various places, and this explains the longer valleys all running north-east.

● *Climate*

The climate of Kéos as a whole is equable, but the higher parts in the north suffer from clouds and mist in winter and summer, and on account of its dampness the capital is said

to be unhealthy. Kéos is perhaps the most humid of the Cyclades, a fact partly explained by its oak forests.

Vegetation and Cultivation

The configuration and climate of Kéos together with the industry of its people make it one of the most productive islands, though its soil is only of average fertility. The flatness of the uplands and the abundance of moisture in soil and atmosphere make cultivation possible to higher levels than in most islands. Its forests of oak (*Quercus aegilops*) are a feature of Kéos : they cover the uplands and even some of the highest elevations, and give the island a green and fresh appearance. The cups of the acorns are 'valonia', used in tanning. These trees, some of which are of great size and age, retain the moisture in the soil which they disintegrate round their roots. In the north over large areas grain is grown among the oaks. Grain (mostly barley but some mixed barley and wheat) and valonia are the chief products of the uplands, though the stonier limestone parts of the south (called Petroússa) are useful for pasturage. Here the country is divided off (cf. Ándros, Délos, Kýthnos) by rough stone walls with huts, and sheep, goats, oxen, asses and mules, and a few horses are raised. Pigs thrive on the acorns, some of which are exceptionally large. The island of Makronési, off the Attic coast, is also used by the Keots for pasturing purposes. On the upper valley-slopes fig, almond and other fruit-trees thrive, and lower down are vineyards, orange and lemon groves. In the valley-bottoms are irrigated gardens. A little cotton is grown, but olives (owing to the prevalence of oaks) are scarce. Bees are commonly kept, and the honey and wine of Kéos are noted, but the silk and cotton industries have nearly disappeared.

The annual agricultural production is estimated as follows : valonia, 250 tons ; barley, 750 tons ; potatoes and onions, each 12 tons ; almonds, 36 tons ; honey, 7 tons ; wine, 5,300 gallons ; charcoal, 1,375 tons. In addition there are about 1,500 head of live-stock.

Industries, Trade, and Shipping

A little iron-mining is carried on, but the chief mine is not at present working. The inner resources of the island, coupled with steep coasts and rough waters, have discouraged seafaring. There are a few fishing and sailor families at Livádi, but they are mostly immigrants, and the island possesses only a few caiques. Coaling was carried on by a Piræus company in Hágios Nikólaos bay before the war and was a flourishing industry, but the station is at present closed.

The island exports all its valonia and almonds and a good part of its charcoal and barley, besides about 1,500 animals (lambs, kids, and calves), a good market being found in the mining district of Lávrion on the Attic coast opposite. The annual value of the exports is about £17,000 (valonia, £6,400; barley, £4,000; cattle, £4,400; charcoal, £1,000). The imports are to the value of about £12,000 annually and are chiefly flour, colonial (tea, coffee, sugar, &c.) and manufactured goods. The coaling dépôt of Kéos imported about 40,000–60,000 tons of coal, mostly from Great Britain, and it yearly supplied an average of 350 vessels of all nationalities. The local trade of Kéos is borne in rather over 100 vessels, mostly Greek sailing vessels and Greek island steamers. All of these call at the port of Hágios Nikólaos.

Inhabitants, Population, and Settlement

In antiquity Kéos was noted for its wealth and prosperity, and is supposed to have contained 4 towns. The striking towers scattered over the island perhaps mark the boundaries between the territories of these towns. In the piratical days the population withdrew to the site of the present capital. Later the harbour of Hágios Nikólaos was an important Turkish naval base, and Kéos was the capital of the Cyclades before the rise of Syra. The Chiot refugees who founded the latter proposed to come to Kéos but were refused. Kéos harbour was later a base for Russian piratical attacks on Turkish shipping, and in the blockade of the Greek coast by

the allies in 1886 it was used as a detention base for captured vessels. To its position close to the Attic coast and commanding the north-east trade-routes Kéós owes its importance and the frequency of its appearance in maritime history.

The capital, **Kéa** (pop. 3,300, P.T.O., C.H., gendarmerie head-quarters for Kéós, Kýthnos, and Sérifhos), is the only town on the island. It occupies a position of great natural strength commanding the valleys and passes of the north and centre of the island, and stands at the head of the deep valley leading down to Livádi and the harbour of Hágios Nikólaos, with which it is connected by a steep road 3 miles long. The town is built on a steep slope and along a narrow saddle (alt. 1,000–1,200 ft.) and is backed by the wind-mill-crowned heights of Palaiómylos ridge and has on both sides terraced and cultivated descents. The houses are solidly built of white stone, and the roofs of the lower often serve as gangways for those higher up. The streets are narrow, dark, paved, and often vaulted over : traffic and accommodation are limited, but the shops and cafés are numerous and well-appointed.

Besides the capital, Livádi (pop. 200) and Vourkári (pop. 140), both on Hágios Nikólaos bay, are the only villages, but a process of decentralization is going on. The crowding together into the capital, a feature of the disturbed Middle Ages and the days of piracy, was quickly found inconvenient when quieter times returned by a population largely agricultural. Consequently the *stávloi* or rude cultivator's huts, which at first were designed merely as temporary shelters and were destitute of all but the barest necessities, were gradually occupied permanently. Cultivators returned to their holdings and took their families with them, and most of the island is now dotted with these rough dwellings, which in some places have collected and form hamlets. The town is now deserted by the peasants except on feast and market days, but most country families still possess their better-appointed town house.

The people of Kéos are friendly, hospitable, and honest. They eat more meat (especially pork) than most islanders and claim to be braver and hardier on that account. Roman Catholicism is extinct on the island.

Harbours

The only good harbour is that of Hágios Nikólaos (to the north-west); the other small bays are useful only in certain weathers or have limited accommodation. The entrance to Hágios Nikólaos bay is between bold headlands and is about 500 yds. wide. Two valleys, one from the south and one from the north-east, converge to form the harbour. The north-eastern bay is called Vourkári and the southern Livádi from the small villages which stand upon them. These bays have beaches and small plains at their head, but the harbour is framed about by high ground. It is about $\frac{3}{4}$ mile long (north-south) and has 12-19 fathoms nearly everywhere. There is plenty of accommodation for large vessels, which can make fast to rocks around the harbour. This harbour has often been used as a naval base and can accommodate a fleet. Its safety and its convenience on the north-east route through Dóro Channel have caused it to be selected as a coaling station. A Piræus firm had a dépôt here before the outbreak of the war. British coal in fair quantities was always kept in stock, there were about 20 lighters, and many vessels of all nationalities were supplied. The dépôt is at present closed. Its fixtures stand in the north-west corner of the harbour just within the entrance, and consist of a coal-wharf, signal-station, coal dépôts, manager's and workmen's houses, and a stone pier, water-main, and slipway for lighters. Most of these (except the signal-station) are in good repair. In the inmost part of the northern harbour (Vourkári) is also a stone quay, shallow alongside but with 7-15 fathoms farther out. Water can be obtained here in winter or summer. In the southern bay (Livádi) is a small stone quay with depth alongside for lighters and small sailing vessels. Fresh water can be obtained from a pump. Lighters are

available for loading and unloading, and a little food can be purchased. There are a road from here to the capital and a line of telegraph.

Communications

A weekly service of Greek packet-boats calls at the main harbour and connects Kéos outwards with Kýthnos and Syra and inwards with Piræus. The island has direct communication by telegraph with the mainland, the cable from Lávrion entering by Hágios Nikólaos bay and proceeding to the capital. There is a branch office at Vourkári now without instruments. This cable connects the island southwards with Kýthnos and the other islands of this group. There is also telephonic communication with Kýthnos.

The island possesses only one road (about 3 miles) from Livádi to the capital, with a branch to Vourkári. The road follows the valley south, and becomes steep and winding and is laid out in steps where it mounts the steepest slopes of the hill. The island tracks are unusually broad, even, and numerous, and give comfortable access by ass or horseback to all parts, even the highest, of the island. There are about 150 mules, 280 asses, and 17 horses on the island.

KÝTHNOS (THERMIÁ)

Area : $29\frac{1}{2}$ square miles. (Length : $11\frac{1}{2}$ miles. Maximum breadth : 4 miles.)

Population : in 1907, 3,191. (In 1896 it was 4,353.) Population per square mile : 108.

Products : iron, which is found in considerable quantities and is the chief export ; also figs, barley, vegetables, cheese.

Physical Features

Kýthnos, rather more than 6 miles south-east of Kéos and 21 miles west of Syra, lies well in the highway of traffic between Athens (Piræus) and Syra, the channel between it and Kéos being used for this purpose. Nevertheless it is little-frequented and comparatively isolated owing to its barrenness and lack of natural resources.

Though irregular in shape, its structure is simple : two flattened ridges, with direction north-east-south-west, joined together by a lower neck-plateau, form the island. Though parallel, these two ridges are neither equal in length nor opposite each other, the northerly being only about half as long as the southerly and attached by the broad neck to the north-western corner of the latter, the appearance on a map being like that of a pair of parallel rulers, whose top arm is shorter and compressed slightly to the right. The northern ridge (Katávolos, alt. 1,148 ft.) is higher at its south end and runs north-east for about 6 miles close to the sea, forming on this flank (i.e. to the north-west) a remarkably straight and steep coast-line. The southern ridge is higher in its northern half (Mt. Prophétes Elías, alt. 1,069 ft.) and sinks as it proceeds south-west ; it has a gently undulating profile and lies along the middle of the peninsula it forms, thus giving an opportunity on both flanks for numerous lateral ravines and streamlets, which issue on an extremely ragged coast. The neck which joins these ridges is elevated (500-600 ft.), but featureless except for the large inlets of Hágia Eiréne and one other on the north-east and Apokraósis, Episkopé, and Mérichas (Mérika) bays close together on the south-west. Besides these, which lie open more or less to the north-east and south-west winds respectively, there is only one other of any size, the harbour Hágios Stéphanos, just below the extreme eastern corner of the island. The general island form is that of a tableland with undulating surface and steep coast, lower than Kéos, and with no pronounced peaks.

The only place where streams have room to develop is in the south-western angle between the neck and the southern ridge. Here there are 3 longer and deeper valleys, whose outlets are the three sister bays mentioned above. These valleys forming practically one depression divide the island physically and administratively into halves.

In general, as regards its physical features, Kýthnos stands to Kéos in much the same relation as Mýkonos stands to

Ténos. The rainfall is scanty, and water is scarce, except in the small western valleys. Windmills consequently abound, a sure indication of aridity in these islands.

Geology

Kýthnos is composed mainly of the same schists interlaid with marble as are found in Ándros, Kéos, and a part of Ténos. Quartzite schist occurs, but mica schist prevails. At one place (in the north between Hágia Eiréne bay and the monastery of Hágios Geórgios) is hornblende schist containing seams of asbestos, and the island is rich in iron ore, which seems to have been worked in antiquity.

On the small plain at the head of the western arm of Hágia Eiréne bay are the famous hot mineral springs which give the island its popular name of Thermiá. They rise at the foot of a hill of bluish marble near the beach, and that known as Kákavos (which has a temperature of 122–131° F.) is very salt and contains also bromine, iodine, phosphate of lime, and some arsenic. The other spring (temperature 104° F.) contains sulphur and carbonates, and both are rich in iron and cover the neighbourhood with a reddish deposit.

The structure of Kýthnos closely resembles that of Kéos, but this structure has little influence on the superficial shape.

Vegetation, Cultivation, and Industries

There is little fertile soil, and the island is unfruitful and suitable mostly for grain (especially barley) and for grazing. The former mulberry and olive groves, if they existed, have disappeared, and the island is now nearly destitute of trees. The best parts are those around the central neck and in the vicinity of the capital. In the valleys of the west are some gardens, fig-trees, and vineyards, and some glens and hollows elsewhere have vines and olives in them, but poor fields of barley and pulse (beans) occupy most room. Kýthnos barley is of good quality. The island is intersected with stone walls and huts, and sheep, goats, pigs, and mules are raised, the latter of excellent breed. Kýthnos cheese (*miséthra*)

is famous, and its flavour is attributed to a shrub (wild laburnum) eaten by the goats. The desolate parts of the island in spring are bright with yellow broom, and red-legged partridges are plentiful here. Bees also thrive and produce excellent honey.

The island produces about 17,000 bus. barley ; 35,000 lb. figs ; 8,000 lb. beans ; and 25,000 lb. cheese ; besides some wine, honey, and wax. About half the barley and cheese, some figs, lambs, and other live-stock, besides iron ore, are exported, and flour, manufactured and colonial (sugar, tea, coffee, &c.) goods are imported.

Shipping and fishing are unimportant owing to the inhospitality of the coast, but mining has been carried on with success. Three deposits are worked, two close to Hágios Stéphanos bay and a third near that of Hágia Eiréne. The value of the iron produced in 1914 is said to have been over £14,000, but since 1915 at least one of the companies has ceased working.

Inhabitants, Population, and Settlement

The poverty of the island is reflected in the houses and condition of the inhabitants : their dwellings are mostly mean and thatched, and the people are poor, though friendly and inoffensive. The island costume (baggy trousers, richly worked jackets, scarves, and caps) survives here as in northern Ándros and Náxos, and the women are often veiled. Roman Catholicism does not now exist. The population is almost wholly confined to two towns in spite of their agricultural pursuits, and no such decentralization is proceeding as in Kéos. This is due partly to the smallness of the island and the uniformity of its surface and partly to its division into two sections by the central western valleys above mentioned. Each of these sections contains a town, from which all parts are easy of access, so that nothing but the merest shelter huts exist on individual holdings. Kýthnos (Thermiá, Chóra ; pop. 1,563, P.T.O.) lies at about the middle of the central neck of the island. It is built along a low exposed ridge at an eleva-

tion of about 500 ft., and is a rather dreary white-housed sprawling village. It is quite surpassed by Sýllaka (pop. 1,628, P.T.O.), the chief town of the southern half, lying picturesquely at the head of the Mérichas bay valley and backed by a fair-sized hill. It possesses good houses and shops and looks more like the regular island town. On Hágia Eiréne bay is the small bathing-place Loutrá. This, though used in Roman and again in mediaeval times, fell into disuse, but under King Otho was laid out and begun on a fine scale. It now, however, lies in a semi-ruinous condition and has only a few cafés and lodging-houses frequented by sufferers from rheumatism, being superseded by a more convenient spring on the mainland. A good road leads from it up to the capital. Kýthnos contains many monasteries, occupied as well as deserted, in prominent positions all over the island. Ovriókastro, the ancient capital, is a massive ruin strongly situated on a bold cliff between Apokraósis and Episkopé bays, while at the extreme north-west are the well-preserved remains of a mediaeval town strikingly situated on a lofty projecting and almost isolated cliff.

Harbours

The lie of Kýthnos exposes its chief inlets to the prevailing north-east and south-west winds, and it has no first-class ports. The best is Hágia Eiréne on the north-east. Inside a narrow entrance the bay opens in two branches running north-west and south-east. It is thus sheltered from all winds except the north-east, when only the extreme south part is safe, and then only for small craft. Near here are iron workings connected by an aerial line with the shore, where there are facilities for loading the ore. On this bay stands Loutrá, the port of the capital, with which it is connected by a 3-mile carriage-road.

Mérichas (Mérchas, Méríka) bay, the port of Sýllaka, is an inlet about $5\frac{1}{2}$ cables deep, open to the north-west, with a rock lying off its southern point of entrance. The shelter afforded is good, but sailing craft find it difficult to get clear of the

harbour. A road fit for wheeled traffic leads to Sýllaka (3 miles). Hágios Stéphanos bay on the east coast, about $\frac{3}{4}$ mile deep and broad, is divided into north-eastern and north-western arms and is sheltered from the north-east. Close at hand are iron mines: the ore is brought on a light railway and deposited by means of shoots direct on board ship. Deep in the outer part, there are 5–20 fathoms at the head, and the anchorage is good but seldom used.

Communications

Greek island steamers visit Hágia Eiréne bay once a week and connect the island outwards with Syra and inwards with Kéos and the mainland. In summer, however, when north-east gales make this port unsafe, these boats do not think it worth while to make the harbours of the west coast, and the island is often isolated for weeks together.

Kýthnos is connected by telegraph with the mainland through Kéos and with the islands south of it through Sérifhos. There is telephonic communication with Kéos and possibly with Sérifhos also. The capital is in telegraphic connexion with Sýllaka.

Two roads, each of about 3 miles, connect the capital and Sýllaka with their respective ports, but there are no wheeled conveyances, and traffic is by asses or mules and mostly over tracks.

SÉRIPHOS

Area: $25\frac{1}{2}$ square miles (nearly circular: diameter about $5\frac{1}{2}$ miles).

Population: in 1907, 4,024. (In 1896 it was 3,851.) Population per square mile: 157·8.

Products: mainly iron ore (the most important source in the Aegean); fruit, cattle.

Physical Features

Sérifhos, a barren island 11 miles south-south-east of Kýthnos, is formed about a rocky dome-shaped mountain mass, rising in the middle to over 1,600 ft. and lying north-east and south-west. The spurs of this ridge, fan-shaped on the south-east and more massed and with a north-westerly trend on the

other side, mould the island into an irregular circle, rocky, elevated, and pierced on all sides by ragged inlets and on the south by at least two large bays, those of Koutalá and Livádi, at the head of which latter is a diminutive and partly marshy plain. Streams and ravines radiate from the central watershed to the coastal indentations on all sides, but none are of importance, and water is scarce.

Geology

In its mineral resources lies the wealth of the island. Biotite gneiss with inconsiderable layers of marble is said mainly to form the mountains. Chlorite gneisses sometimes intervene, and there is a small seam of quartz porphyry. Deposits of silver-bearing lead, magnesite, and copper ores are said to occur. Most important, however, are the iron ores. In the south-west part of the island haematite is found in considerable mass, and on the promontory called Chálara in the south-east magnetite occurs. These iron ores are mostly in limestone but sometimes at its point of contact with clay schists. A red-brown pottery clay is found, and near the harbour of Livádi are seams of lignite, and here too is a warm spring said to possess medicinal properties.

Industries, Trade, and Shipping

The mountainous parts are bare and unfruitful, but the small valleys admit of a little cultivation. Before the rise of the mining industry the island was mainly agricultural and produced fruit (apples, citrons, and table grapes) and wine in small quantities. Onions are still an important product, but agriculture is now quite overshadowed by mining.

The magnetite deposits in the south-east are the property of the Government, who let out the working of them to private contractors. Lead ore has been mined at Moutoúla, but by far the largest workings are the iron mines, the principal ones being on the western side of the island. The output has shown a continual increase and has been nearly doubled within the last 10 years. The chief mine

belongs to a company (in which French interests are represented) known as *Speliaséza*, which employs nearly 1,000 workmen. The labour conditions were unsatisfactory, and there was recently a serious strike. Improvements have now been made, and the miners seem to be well cared for—a hospital, recreation rooms, cafés, church, and free school have been erected for them by the company—but they are dissatisfied.

Those of the inhabitants who are not agriculturists or miners are mostly sailors.

The island exports a little fruit and a few cattle. The export of iron ore amounts to about 200,000 tons yearly, valued at £30,000–£40,000. (In 1912 the net profits of the *Speliaséza* Company was £29,400.) This is conveyed in about 40 vessels, about 10 of which are British. The mining ports are Méga Livádi and Port Kórakas, and the ore goes mainly to the United Kingdom, Austria-Hungary, Germany, and the United States.

Population, Settlement, and Harbours

The capital, Séríphos (pop. 2,160, P.T.O.), is built on a conical hill overlooking Port Livádi. Its white houses cling to the steep hill-side: its streets are narrow, steep, and filthy. In the interior there are several small villages with a population of about 1,200 between them. Port Livádi (pop. 687, P.T.O., C.H.), an excellent harbour at the south-east, is the port of the capital. The bay is framed in by high rocky hills and is about $1\frac{1}{4}$ mile deep northwards with entrance towards the south and about 600 yds. wide. The anchorage (8–12 fathoms) near the head is good in any weather, and water can be obtained. There is room for about four steamers at a time and limited facilities for loading. The port is hot and close in summer. Before the war a British consular agent was resident here, and there is telegraphic connexion with the capital. The chief mining port is Méga Livádi in a bay to the south-west of the island. Here are a Decauville railway from the mines to the harbour, facilities for loading ore on to steamers,

besides foundries and other workshops with a considerable number of mechanical appliances. On the hill-side overlooking the harbour is the mining settlement containing the dwellings of the miners besides the public buildings in connexion with the settlement. Most of the harbours on the south and west are exposed to south-west winds, and the accommodation in them, as also in Méga Livádi harbour, is limited

Communications

A weekly service of Greek steamers connects Séríphos outwards with Síphnos, Mélos, and Kímolos and inwards with Syra and Piræus. These boats call at Port Livádi. Cargo vessels call for the iron ore at Méga Livádi and at Port Kórakas. Séríphos is connected telegraphically with the mainland through Kýthnos and Kéos and with Syra through Síphnos and Páros, and the capital is similarly connected with its port (Livádi). There are no roads, and the tracks are rough and difficult. Mules and asses are used for transport, there being about 100 of each on the island.

SÍPHNOS

Area : $28\frac{1}{2}$ square miles. (Length : $9\frac{1}{2}$ miles. Maximum breadth : $4\frac{1}{2}$ miles.)

Population : in 1907, 3,777. (In 1896 it was 4,060.) Population per square mile : 132.5.

Products : cereals, vines, olives. Iron and manganese are mined. The chief industry is the manufacture of pottery.

Physical Features

The most southerly of the North-Western Series and about 10 miles south-east of Séríphos, Síphnos in many ways offers a striking contrast to the two intervening islands, Kýthnos and Séríphos, and is rather to be compared in point of productivity and agreeableness with Kéos. Triangular in form, with one apex (pointing east) a nearly true right angle and its other points directed south and north-west respectively, Síphnos is bounded by coast-lines straight in general direction

but broken into on the west and south-east by numerous fair-sized inlets.

The highlands lie all to the west and are formed by three parallel ridges stretching like bars nearly across the island from north-west to south-east. On the north-west the ends of these ridges form steep rounded promontories, between which are the only considerable valleys, terminating in the inlets mentioned above. The heights average 1,500–1,600 ft., but the most southerly ridge, Mt. Prophétes Elías, which turns a broad furrowed flank to the south-west coast, is 2,280 ft. Towards the south-east all the ridges coalesce and sink to form a plateau something over 800 ft. high, and this eastern area of the island, occupying its right-angled apex, contains most of the population. The two most important bays on the south coast are those of Pháros and Platialós, and on the west, Vathý and Kamárais. The streams are negligible, but springs are abundant and water plentiful.

Geology

In the composition and structure of its rocks, as also in its plateau features resulting from erosion, Síphnos resembles Syra much more than the other islands of its group. The mountains are composed of great layers of marble inset with layers of schist and epidote, which present in the northern parts the same beautiful varieties as in Syra. The prolongation of these schists towards the east forms the fertile eastern tableland, which is covered with schist débris. In the marble haematite is found, and the iron ore contains galena, carbonate of lead, zinc-spar and zinc-sulphide, and decomposes into a rusty mould containing these ores in loose lumps. Near Hágios Sóstis (on the north-east coast) are the mines in which silver and even gold are said to have been found in ancient times. Gold is not now evident but may exist in deeper flooded workings. It was possibly its mineral resources which earned Síphnos in ancient times its reputation as the richest of Greek islands. Clay suitable for earthenware occurs.

Vegetation, Cultivation, and Industries

The mountainous parts have juniper, wild olive, and other scrub upon them. The most fertile part is the eastern plateau, which is carefully cultivated. Siphnos is noted for its agricultural and garden products, and this plateau is the chief source of them. Barley, peas, potatoes, and onions are grown, 'Siphniot onions' being almost proverbial. Here too are rich fruit-gardens (oranges, lemons, figs, and other fruits) as well as olive groves and vineyards. The grapes of Siphnos are (like those of Sérifhos) mostly for table use, and not much wine is made. A fair amount of live-stock is kept, and pigs and poultry are plentiful around and in the villages, and there are a good many asses and mules. Pigeons are kept, and their cots are seen everywhere, as in Ténos.

The agricultural production is estimated as follows : olive-oil, 44,000 gall. ; barley, 2,200 bus. ; peas, 70,000 lb. ; figs, 56,000 lb. ; grapes, 280,000 lb. ; potatoes, 28,000 lb. ; onions, 56,000 lb. ; oranges and lemons, 200,000 pieces.

Besides agriculture there are two important industries : mining and pottery. The mines, which are chiefly in the hilly parts to the west and north-west, employ about 200 men. In 1914 about 13,000 tons of iron and 4,000 tons of iron-manganese ore were produced, and the annual value of the output is said to be nearly £5,000. Siphnos potters are noted in the islands, though their work is rough. There is a pottery settlement on Platialós bay, and other potters find work in the neighbouring islands. Their glaze is imported. This industry brings an annual revenue of about £4,000. Besides these, there is a straw-plaiting industry of hats.

The exports are chiefly olive-oil, vegetables and fruit, pottery, straw-hats, and mineral ores, which more than cover the imports of flour, manufactured and colonial (coffee, sugar, tea, &c.) goods.

A certain amount of seafaring is carried on, and the men of Siphnos emigrate as restaurant-keepers and cooks, while the women weave cotton goods, and some serve as housemaids on the mainland.

Inhabitants, Population, and Settlement

The people of Síphnos are industrious and prosperous. Descendants of Italian families can be traced by their names, but Roman Catholicism is extinct. There are numerous churches on the island. The eastern plateau is thickly covered with well-built villages ; the Siphniot houses are whitewashed and appear clean. The capital, Apollonía (Stavró ; pop. 750, P.T.O.), is situated on the western slope of the plateau. One mile to the north lies the largest settlement, Artemón (pop. 1,560, P.T.O.). In the same area is Kástro (pop. 267, P.T.O.), above a bay of the east coast. This, the former (Latin) capital of the island, shows signs of former well-being but is now dilapidated. Here was the once-famous monastic school founded by refugees from Constantinople. Like the shrine of the Evangelistria in Ténos, it fostered Greek national spirit and traditions in the days of oppression, but after the War of Independence it fell into decay and oblivion. Hexámpela (pop. 400), Katavaté (pop. 430), and Káto Petáli (pop. 300) are other villages in the vicinity, while on its bay 3-4 miles west of the capital is Kamárais (pop. 120, P.T.O.).

Harbours and Communications

Kamárais bay is the only harbour artificially improved : it has a small breakwater which can shelter 3 or 4 small vessels, but it is exposed to the west. The safest harbour is Pháros bay (on the south), but it can accommodate only 2 small steamers. The other bays, situated at distances of about 3 miles from the capital, are all more or less exposed to the prevailing winds. Landing is everywhere by boat only.

A Greek island steamer calls weekly at Kamárais bay and makes connexion with Mélos and Kímolos outwards and with Sérifhos, Syra, and Piræus inwards. The cable from Mélos to the mainland (via Kéos) passes through Síphnos, and there is also a cable to Páros. Telephonic communication exists with Mélos and internally between the principal villages.

Decauville lines connect the mines with their harbours. The inland tracks are rough ; there are no carts, and transport is effected by mules, of which there are a good number.

ISLETS AND ROCKS OF THIS SERIES

Near to the southern point of Sípunos is the islet Kitriané, used as a summer pasturage by the Siphniots. It offers a fairly secure anchorage in 15 fathoms on its northern side in south-west winds. Seriphópoulo (alt. 656 ft.), 6 miles north-east of Sériphos, has pastures and grain-fields belonging to Sériphos. East of Sériphos is the rock Vóide (alt. 436 ft.), and between Seriphópoulo and Kýthnos is the islet Pipéri, which is said to have a supply of drinking-water, and which, like Seriphópoulo, is composed of marble.

(D) CENTRAL SERIES

(NÁXOS, PÁROS, ANTÍPAROS ARCHIPELAGO)

These islands with their attendant rocks and islets form a fairly compact group lying at about the centre of the Cyclades. In area (265 sq. miles) they are second only to the North-Eastern Series (270 sq. miles), from which, however, they differ in many respects. Instead of an extended mountain-chain interrupted by gaps, there is here a broad land mass shaped as a whole like a triangle with its base facing east and its apex south-west. This triangle is cut across at four places (from north to south) by sea-passages, which are plentifully strewn with rocks. The greatest elevation is along the eastern base, and the altitudes steadily diminish towards the south-western apex. Separated by broad stretches of open water on the north-east, north, and north-west from Ikaría, Mýkonos, and Syra respectively, and by narrower waters on the west, south-west, south, and south-east from Sípunos, Íos, Amorgós, and the smaller islands of the Southern Diagonal Series, this group forms a physical and economic unity clearly revealed by its com-

parison as a whole with other groups and recognized in its common local designation, Paronaxiá. It contains in Náxos the largest island—with the highest mountains and most diversified features—in the Cyclades, and in Páros an island of unique form. Except for a part of Antíparos, the group has a homogeneous geological composition distinguishing it from the northern Cyclades islands and from other groups. The climate of these islands offers greater varieties but less extremes than that of any other group and is considered one of the healthiest and most agreeable. Náxos with its mineral resources, its fine valleys and streams, and its great variety of agricultural products is economically perhaps the most important island of the Cyclades, and one of the chief islands of the Archipelago. Páros, though smaller, is famed for the quality of its products and for its marble, while Antíparos has mines of value.

In the description of this group a beginning has been made from the south-western apex.

ANTÍPAROS ARCHIPELAGO

This consists of three chief islands together with an immense number of islets and rocks. The whole forms a (10-mile) long acute-angled triangle, whose concave inner (east) coast fits against the rounded mass of Páros like a cap. At the peak is Strongyló (alt. 616 ft.); next (900 yds. north-east) in position and size comes Despotikó (about 4 sq. miles; alt. 639 ft.). It is hilly, covered with brushwood, and is used for pasturing goats. A small plain containing a well with fresh water is reported upon it. Despotikó fits closely against Antíparos, forming with it a useful harbour (see below).

Antíparos has a boomerang-like figure fitting roughly against the rounded south-west coast of Páros. But, though concave towards the east, its central part is thick enough to form a square block, and its south-eastern arm draws away somewhat from Páros. Its north-eastern arm on the other hand follows the sweep of the north-west Páros coast, and its north-easterly prolongation in a number of rocks covers

the entrance of Paroikiá harbour (q.v.). Thus the water between Páros and Antíparos on the south is triangular, 5 miles broad at the south and narrowing to 1,000 yds. at the north. Vertically down the middle of this sea-triangle runs another chain of rocks and islets bisecting the passage, which is consequently dangerous and used only of necessity.

Antíparos

Area : 17 square miles. (Length : 7 miles. Maximum breadth : $2\frac{3}{4}$ miles.)

Population : in 1907, 868. Population per square mile : 51.

Products : wine and zinc.

Antíparos, anciently called Oliaros, has a ragged and irregular outline consisting of a central square block with arms stretching south-east and north-east, the latter being the longer and broader. The central block is formed by a mountain (Mt. Hágios Elías, alt. 1,010 ft.) which approaches the coast steeply except on the south. The spine-like ridge which forms the south-eastern arm of the island projects from this central mountain. On the north the latter has a gentle slope, and in this direction lies an inland oval depression, north of which is a belt of hilly country and then one more small coastal plain near the northern extremity.

As a whole the island resembles geologically the northern Cyclades islands rather than Páros, for, though gneiss occurs, the prevailing rocks are mica and quartzite schists with marble seams of inferior quality. Iron ore is found containing pockets of calamine and zinc ore. Mt. Hágios Elías is said to be a solid block of marble, and on its eastern slopes, reached by a track leading north-east from Port Despotikó, is the Antiparian grotto, the most famous in Greece, imposing even in its present damaged condition. The south part of the island is said to show volcanic formations (trachyte, perlite, and obsidian).

The hills are covered with maquis scrub and teem with goats. The ground available for cultivation is limited in extent but is productive. In the small plain near the northern

extremity grain and vines are grown, and the oval depression at the foot of Mt. Hágios Elías, is covered with vines. A good deal of wine is exported.

The zinc mines are worked by the French Lávrion Co. About 60 workmen are employed, and the normal production is about 3,000 tons of ore annually. The profits (net) in 1912 were about £600. The iron ores do not seem to have been exploited.

The only settlement, Kástro, is in a hollow at the north end of the island. It is an old fort (as its name signifies) and is built so that the backs of the houses form a circular wall, pierced by gates. It is unclean and unhealthy and is said to have been a resort of pirates and other refugees.

Antíparos itself has no inlets of importance, but the east end of Despotikó, fitting against the south-west of the island, leaves an angular passage nearly 1 mile wide (east-west) and 800 yds. long (north-south), and nearly closed by an islet lying athwart its north-western exit. This water, known as Port Despotikó, forms a convenient anchorage in all except south winds in about 10 fathoms. Communication is only by sailing vessel and usually with Páros

PÁROS

Area : 64 square miles. (Length : about 12 miles. Breadth : 7 miles.)

Population : in 1907, 7,623. (In 1896 it was 7,740.) Population per square mile : 119.

Products : corn, wine, olives, cheese, honey, and tobacco. The marble quarries are not now worked.

Physical Features

Páros is perhaps the simplest of all the Cyclades in structure and differs considerably from the others in appearance. It is little more than a sharp and steep-sided ridge whose lower spurs descend with various declivities and irregularities to the sea. The ridge, which lies west-north-west to east-south-east, has 3 peaks. The highest is in the middle, Mt. Prophétes Elías (alt. 2,460 ft.); the other two being 2,450 ft. and 2,054 ft. high

respectively. The mountain mass taken as a whole is conical. Thus Páros, of which this cone is the culmination, is nearly circular, or, allowing for the accretions at the north, rather oval, with its longer axis north-east-south-west. There are only two bays of importance: Náousa bay on the north-east and Paroikiá on the west. Apart from these and a few minor hollows on the east coast (e.g. Mármara bay) the outline is simple.

The central mountain does not approach the coast evenly all round. At the west, north-west, and south-east it terminates somewhat abruptly in cliffs, but on either side of these points and separated by the intervening spurs are areas of comparative lowland, those on the north-east and north-west being the most important. The former has been partly formed by marine accretions, but the north-western coastal area is due to a ridge of low coastal hills separated by a valley from the central cone. This valley, stretching from Paroikiá to Náousa bay, is important as a gangway round the northern spurs of the central mountain, and connects the two most fertile and most populated parts of the island. Other than these lowlands and a few glens to the east and north-east of Mt. Prophétes Elías, the valleys are negligible, and there are no streams of importance, though springs are plentiful. The coasts, except where spurs approach them closely, are low, and this, together with its simple conical structure, distinguishes Páros sharply from most of the other Cyclades with their elevated tableland formations.

Geology.

Páros is largely formed of marble and gneiss alternating with one another in layers. But, whereas in the upper levels marble predominates and forms a thick cover over a great part of the island, the lower strata are mainly gneiss with continually diminishing marble seams. The marble is mostly of inferior quality, sometimes almost unrecognizable owing to the presence of foreign elements (hornblende, magnetite, biotite), but sometimes also, especially at lower levels, of that

translucent silvery whiteness which has made it famous in all ages. The alternating layers of marble and gneiss often give a curious streaked appearance to the hills (e.g. the eastern slopes of Mt. Prophétes Elías), and the marble tends to pass over into gneiss. The gneisses contain black mica schist, magnetite, pyrolusite, and, in the south-west, large emery deposits. Copper is said to have been mined near Náousa, and manganese perhaps occurs in the limestone. In several places between the stratified gneisses are large outcrops of granite, volcanic in origin, which cover many places with boulders large and small and disintegrate into sand. Between Náousa and Mármara serpentine appears, and near Paroikiá bay trachytes. Lastly Páros, like Mýkonos, has some recent and possibly marine deposits. These largely compose the hill-and-valley area of the north and north-east and consist of porous and marly limestone and conglomerates resting upon a serpentine base.

The general form of the island is not determined by its geological structure, but the details both of feature and fertility are greatly influenced by the character of the rocks. Thus the ridges, peaks, and tablelands are mostly of marble, hard and infertile, and marble covers the greatest area. Equally infertile are the granite regions, but the rich valleys and fertile lowlands are formed by erosion of the gneiss schists, and the soft dark rounded hills of this material stand in sharp contrast to the bright and striking marble areas.

Vegetation, Cultivation, and Industries

Páros is milder and warmer than most of the northern Cyclades, and date-palms grow well, as they do in Náxos, but the fruit does not mature. Beyond a scanty scrub on the highlands and reeds in some of the valleys there is no natural vegetation.

The extent of cultivable land is not great, but it is of varied composition and often rich. This, together with the mildness and moistness of the climate, gives to the products of Páros their delicacy and flavour, while it also explains their

variety and limited quantities. The most fertile parts are in the north-east, north, and north-west, including some of the valleys of the east coast as far south as Driós bay. The north-east and north-west districts, though separate and having settlements of their own, are similar in geological formation and products. The low gneiss foothills of these parts have fine vineyards and olive groves. In the warm valleys of the east coast, where springs abound, are irrigated gardens containing orange, citron, and other fruit-trees, and recently considerable quantities of potatoes have been grown. The low and hilly north-eastern coastal region, though somewhat dry, supports vines and grain. In the marble uplands sheep and goats are pastured, and the island mules and asses are of good quality.

Páros cheese (made from goats' milk), honey, and lambs are highly prized, and along with potatoes and fruit are exported in small quantities, mainly to Syra. Parian wine, dark red, rich, and sweet, is exported to Chíos, Smyrna, and Constantinople. The grain (wheat and barley) grown is insufficient for home consumption, and flour has to be imported.

Agriculture is the chief occupation, but quarrying and a little mining are carried on spasmodically. Parian marble, famous in antiquity, has recently been worked by the British company, Grecian Marbles (Marmor), Ltd. The workings were underground, but they have now been abandoned. Emery occurs in the south part of the island but is not worked, the Government confining the production to Náxos. The other mineral deposits (magnesite, pyrolusite, and copper) appear not to have proved valuable.

Besides fishing-boats, the island possesses a good many caïques. The Parians do a good deal of their own export trade in these, and the harbours of Paroikiá and Náousa are busy in the season with the export of wine.

Inhabitants, Population, and Settlement

The island ranked high in the estimation of antiquity and seems not to have suffered from great disorders. The people

are quiet, orderly, hospitable, and intelligent; the two principal towns contain many persons of superior education, and the islanders are noted for their local patriotism and pride in their homes. The Greek Orthodox is the only religion, Roman Catholicism being extinct. The method of settlement differs from that both of Ándros and of Kéos: the population is contained in a number of larger villages, from which as centres the neighbouring lands are cultivated. This arrangement is no doubt explained by the richness of the soil and the distinctness and self-contained nature of the cultivable areas.

The capital, **Páros** (Paroikiá; pop. 2,718, P.T.O., C.H.), is situated on the south-eastern shore of Paroikiá bay, a position which it has maintained since antiquity. A bold rock projecting upon the coast divides the bay into two curves, and along these the town stretches up a gentle slope. Well built, with clean paved streets and whitewashed houses, often of several stories, and with terraces and trailing vines, it presents an attractive appearance and is distinguished by its fine and ancient church. The capital is the chief port and also the centre of the north-western agricultural area.

The corresponding town on the north-east is Náousa (pop. 1,320, P.T.O.), which stands on the south side of its bay. Situated at the mouth of a large valley, where a small peninsula prolonged by a mole makes a double harbour, the older town has narrow and often covered ways and is curiously laid out in rectangles, while the newer parts climb the neighbouring hill-side. The harbour is used by wine-exporting caïques. The town, though in a rich neighbourhood, is subject to mosquitoes and fever. South of it lies the village of Kóstos (pop. 307), and in a side-valley of Mt. Prophétes Elías is Léfkes (pop. 1,922, P.T.O.), a dirty prosperous town-ship buried in orange and lemon groves and surrounded by numerous springs. Farther south are several other villages, the largest of which, in the midst of grain-fields, is Tsipídos (pop. 1,063, P.T.O., C.H.).

Harbours

Páros possesses one first-class and one good harbour and, taken as a whole, affords in its bays shelter in any weather. Port Paroikiá, on which stands the town of Páros, is a convenient harbour on the west coast, protected from the north-west by a promontory and low hills and from the west and south-west by Antíparos and the chain of rocks which prolong it northwards. The harbour is $\frac{1}{2}$ mile wide at the entrance, $1\frac{1}{2}$ mile deep (east-west), and a stone pier and a break-water (on the south and north respectively) lend additional shelter, but the accommodation for large vessels within the 5-fathom limit is limited. Landing is done by boats and lighters, but in very rough weather from the north-east or south-west landing operations are difficult.

Náousa bay, on which the town of that name stands, is one of the most commodious harbours in the Cyclades, a whole fleet being able to anchor there. From an entrance 1 mile wide the bay broadens eastwards and westwards behind low rocky capes to 2 miles and extends $1\frac{1}{2}$ mile deep to a low shore. The inshore waters are shallow and set with numerous rocks, but in the north-west corner—called Ioánnes bay—is well-sheltered anchorage in from 6 to 9 fathoms, while the north-east corner (Langerí bay) is also good (7 fathoms). These side-havens are sheltered from the north-west wind, to which the other parts are rather exposed.

On the south-east coast, between Capes Chioúni and Pýrgo, is Driós harbour, protected on the east by two islets (Makró and Práso) and in front by Driós Island. It is a safe anchorage, $6\frac{1}{2}$ cables wide, but is rather exposed to the south-west and unsafe in winter owing to the swell. Water can be obtained here in plenty but with some difficulty in south-west winds owing to inshore rocks. Formerly a Turkish naval station, it now has no settlement upon it.

The bay of Mármara on the east coast, which has a sandy beach, can be used by small sailing craft only.

Communications

Páros is well served by various lines of Greek island steamers. Five vessels a week call at the capital. These boats all make connexion outwards with Náxos, Íos, and Théra and with Syra and Piræus inwards, but there is a weekly boat calling besides at Náousa and all the islands of the southern Cyclades (except the Mélos group), and including even Herákliá and Donoúsa.

Páros is the telegraphic centre for the southern islands, and the main line from Syra splits here, one branch linking it with all the southern and south-eastern islands through Náxos, the other linking the Mélos group and the western islands with the central (Syra) system through Síphnos. There is telephonic communication between the capital and Tsipídos and between Léfkes, Náousa, and Náxos.

There are no roads, but good tracks connect the capital with Náousa and Tsipídos; transport is by means of asses and mules. The marble quarries (about 2 miles east of the capital) had a light railway, but this has now been removed from the island.

NÁXOS

Area : 168 square miles. (Length : 18 miles. Maximum breadth : 12 miles.)

Population : in 1907, 16,694. (In 1896 it was 15,655.) Population per square mile : 99.

Products : emery, olives, wine, fruits (oranges, lemons, plums, apricots, citrons), cheese, hides, cattle, and vegetables.

Physical Features

The largest, most compact, most definite in shape and structure of all the Cyclades, Náxos is in many ways strikingly unlike its fellows. Its bare towering crags, deep-bitten ravines, and rugged almost savage mountain profile stamp it as a part of the Greek mountain series, but its occasional snows and the aloofness of its heights and gorges seen across plains and rolling foothills create an impression of space and remoteness out of keeping with its actual size and island character. In Náxos live at least some people whose life has little or

nothing directly to do with the sea, and its variety of physical and cultural features no less than the charm of its landscape make it one of the most noteworthy of the Aegean islands. The dominating feature is its mountain spine, which stretching from end to end of the island (north-north-east to south-south-west) is unique in height, length, and continuity in the Cyclades. Rising from the north point (Cape Stavró) to an altitude of nearly 3,000 ft. within a distance of barely 3 miles, it runs in an ascending sweep, with only two dips to about 2,000 ft., to a little below the centre of the island, whence it subsides gradually and terminates at the south point in a steep boss. Six miles from its northern extremity is Mt. Koróna (alt. 3,250 ft.), separated on its south by a pass 2,170 ft. high from the long ridge of Phanári, whose highest point (2,963 ft.) is about the centre of the island. South of this two passes (Hágios Ioánnes, alt. 2,070 ft., and Hágia Marína, alt. 1,952 ft.), separated by a smaller rise, intervene between Phanári and Mt. Ziá (alt. 3,294 ft.), popularly known as Mt. Zeus, the highest point on the island. Around this main spine the rest of the island structure arranges itself. On the east spurs, themselves considerable ridges (one reaches 2,600 ft.), form a trapezium whose longest side, parallel with the central spine, faces east, with shorter sides facing north-east and south-east respectively. These lateral ridges have a slight tendency towards the north, and are separated by deep gorges and terminate in a series of curious knobs, whose outer sides fall precipitously into the sea. To the west of the principal chain is a large obtuse-angled isosceles triangle, the northern half of which is filled with lateral spurs and ravines similar to those on the east, but with a north-western tendency. Towards the centre and south, however, these lateral ridges diminish and give place to broad plains, partly alluvial and broken up by several ranges of low rolling hills parallel to the main spine, and at varying distances west of its centre. These hills, which are rounded, craggy, and sometimes wooded, are quite distinct in appearance from the main spine, whose hard sharp contour they throw into relief.

Náxos has hardly any inlets of importance: on the east and

north-east the mountains tower too close above the sea and are too compact and uniform to admit large bays. There is a curious oblong promontory on the east coast which forms below (i. e. south of) it the harbour of Moutsoúna, and there are a few minor inlets on the south-east. Otherwise these coasts, though jagged and towering, are curiously straight in outline. To the west and south-west, however, where the features are gentler, the large plains referred to above are divided from each other by low rocky spurs reaching out westwards to the coast and forming low promontories, between which are broad bays with sandy beaches or mud flats at their head, while just north of the most westerly point is Náxos bay, the only even tolerable harbour of the island.

The main streams flow towards the western bays, the largest having its source below Mt. Phanári, and draining with its tributaries the large, beautiful, and elevated Trageía basin about the centre of the island. Breaking from this in a west-north-west direction it winds through several gorges and empties into Náxos bay. Beside this there are one or two streams with a constant flow and capable of driving mills; torrents and mountain springs are plentiful, and the water-supply, whether from these sources or from wells, is good, but windmills and wells are also resorted to.

Geology

The character and structure of the rocks resemble those of Páros. The great mass of the island is composed of biotite gneisses alternating, especially in the eastern half, with layers of marble, mostly of inferior quality. Around and north-east of the capital, as well as at the extreme north, the centre (Trageía district), and near Mt. Koróna, are great masses of granite, streaky in appearance and probably of volcanic origin. Along the west coast later deposits of conglomerates, marl, and sandstone correspond to those on the opposite coast of Páros, and a little west of Mélanes and Potamiá is a strip of sedimentary rocks (sandstone and conglomerates) in the midst of gneiss, a curious and noteworthy feature.

Emery occurs in the marble layers and is found mostly in the north-east, but possibly also near the centre of the island. Composed of corundum with varying quantities of magnetite and mica, it is most valuable when it contains the greatest percentage of corundum, least when it contains much mica.

The structure of the rocks has no prevailing influence upon the general surface character of Nákos, but, as in Páros, the character of the various rocks has determined individual features, and this is observable to a much greater degree than upon the latter island.

Climate

Like Páros, Nákos is somewhat warmer and quieter and has a smaller rainfall than the northern Cyclades Islands, but its climate, influenced by its mountains, is more varied than that of Páros. The highlands are bleak in winter, and sometimes have snow upon them for several days. The deep gorges of the north-east on the other hand are warm and sheltered in winter, and in summer hot and close. The lowlands of the west—sheltered from the north-east and open to the south-west—are mild in winter and apt to be parched in summer. The most temperate and agreeable part of the island is the upland basin of Trageia.

Vegetation and Cultivation

The island has been denuded of wood for burning and for mining purposes, and of its former forests there are now bare traces. Small woods of holm-oak and deciduous oak are still found on the highlands. The valleys (particularly those around Éngares in the north-west) are filled with oleanders and carobs, and on some of the hills are juniper bushes and other scrub. The plains south of the capital are distinguished by their hedges of aloes (*Agave americana*), and in the valleys and plains of the west grow the bamboos which are largely exported to Syra.

The size, diversity of feature, and geological composition of Nákos are reflected in the quantity and variety of its products ; the mildness of climate, abundance of water, and richness

of soil, in their quality. Various areas can be distinguished according to their products : an upland grazing area ; grain-producing slopes and elevations ; rich valleys and lowlands supporting fruit and vegetable gardens. Each of these areas has its characteristic villages and settlements.

The highlands (especially in the south-east) serve for grazing, and herds of goats, sheep, and cattle roam free with herdsmen in the manner of the mainland. On the acorns of the oak woods (in the north) pigs are reared. The cultivable highlands and the poorer valleys and plains of the south-west have extensive grain-fields yielding chiefly barley, which is grown also between the olive-trees in the Trageía basin. The richer plains produce potatoes and other vegetables, besides a little tobacco. Náxos has two crops of potatoes a year, and these, besides tomatoes and onions (the latter mainly from the north-eastern valleys), are largely exported. The ancient divinity of the island was Dionysos, and the north-eastern valleys still yield a good red wine, the boast of Apeíranthos. The slopes and well-watered valleys of the west have fine orange, lemon, citron, and apricot groves. All the fruits are of fine quality and are exported. Náxos has more olives than any other island of the Cyclades : they grow chiefly in the Trageía basin, and black olives and olive-oil are exported. The home-grown corn is sufficient only for 6 months of the year.

Industries, Trade, and Shipping

Agriculture, formerly the most important occupation, is now second to mining and is somewhat neglected, though a revival has taken place during the war.

In striking contrast to the agricultural areas is the bleak and harsh mining district of the north-east. North of Komiaké (near Apóllon bay) there are marble, granite, and serpentine quarries which have been worked intermittently, and on the west coast is a Government salt-works.

By far the most important mining industry of the island, and of the Cyclades, is that of emery. Emery is found in the

north-eastern and southern parts of the island, in Páros, Herákliá, and Íos, as well as in some of the islands of the eastern Aegean (e.g. Ikaria, Sámos) and Asia Minor. The latter, though of inferior quality, is a competitor on the market with Náxos emery, but within the Cyclades the Government, which holds a monopoly (see Vol. I, p. 162), confines the working of it to the north-eastern district of Náxos. The mines are in the neighbourhood of the villages of Vóthri and Apeíranthos, situated high up on the eastern side of the main ridge. The deposits are estimated to contain 5 million tons; the mineral is so hard that blasting has to be resorted to. The Greek Government formerly determined in advance the annual output and often artificially restricted it. Also, while not effectively controlling the mining, it inspected the ore at Syra and rejected that of inferior quality. The miners, who number about 1,000 and regard the right to mine as an hereditary privilege, were paid according to output. The result of all this was primitive, haphazard, and wasteful methods in mining, increased cost of production together with loss to the miners, whose lot was otherwise hard. In 1913 there were serious strikes and reduction of output in that year to about 1,100 tons. Since then matters have been taken in hand by the French Government, who have exercised a strict control, improved the condition of the miners, introduced better methods, and largely increased the output. From the mines the ore is conveyed on mules down the steep gorges to the little ports of Léonas and Moutsoúna, where it is put on vessels for conveyance to Syra.

The annual production of Náxos is estimated approximately at: potatoes, 1,250 tons; onions, 400 tons; tomatoes, 300 tons; black olives, 250 tons; barley, 5,300 bus.; olive-oil, 147,000 gall.; oranges and mandarins, 1,000,000 pieces; other fruits, 250 tons; citrons, 1,000 barrels (= 250 tons); wine, 300,000 gall.; honey, 50,000 gall.; tobacco, 38 tons; cheese, 46 tons; besides cattle, sheep, mules, poultry, &c. Since the war the production, especially of potatoes and onions, has increased, and in 1918 over 2,500 tons of potatoes

were grown. The annual emery output before the war was 6,000–8,000 tons, but latterly the production, stimulated by war needs and the development of metallurgical industry in the United States, has risen to over 20,000 tons.

Nearly all the potatoes, tomatoes, fruits, and a good part of the olives and olive-oil are exported, besides about 10,000 hides and 3,500 head of cattle annually. The export of citrons in brine (at present discontinued) takes place normally through Syra, and has an average value of £5,000–£6,000. The emery is all exported, the annual value formerly (1910–14) ranging from £30,000 to £50,000, but the war production must have fetched on an average double that amount annually.

The agricultural produce goes almost entirely to Greek ports (Piræus, Syra, Salonica); the emery was exported, through Syra (see above, p. 83), mainly to the United States, Great Britain, and Holland, but since the war mainly to the belligerent allied countries.

The local maritime activity of the island is insignificant, and there are only a few caïques engaged in fishing and in the export of agricultural products. Most of the export trade now goes by the island steamers, and the emery is carried in special iron steamers, which have replaced the small sailing vessels previously employed.

Inhabitants, Population, and Settlement

The people of Náxos are industrious, though lacking in enterprise. To this fact is due the great productivity of the island coupled with the comparative poverty of its inhabitants. Mining is poorly paid: the higher officials are mostly imported; the conditions of life are hard, the environment and conditions of labour were until recently discouraging, and the mining villages bare and miserable. The miners themselves are turbulent and feared by the other Naxiots, amongst whom they have the reputation of being thieves. They are of a distinct type, thick-set, dark, often with curly hair and ruddy complexions, and are probably of Cretan origin. The agriculturists on the other hand are quiet, inoffensive, but

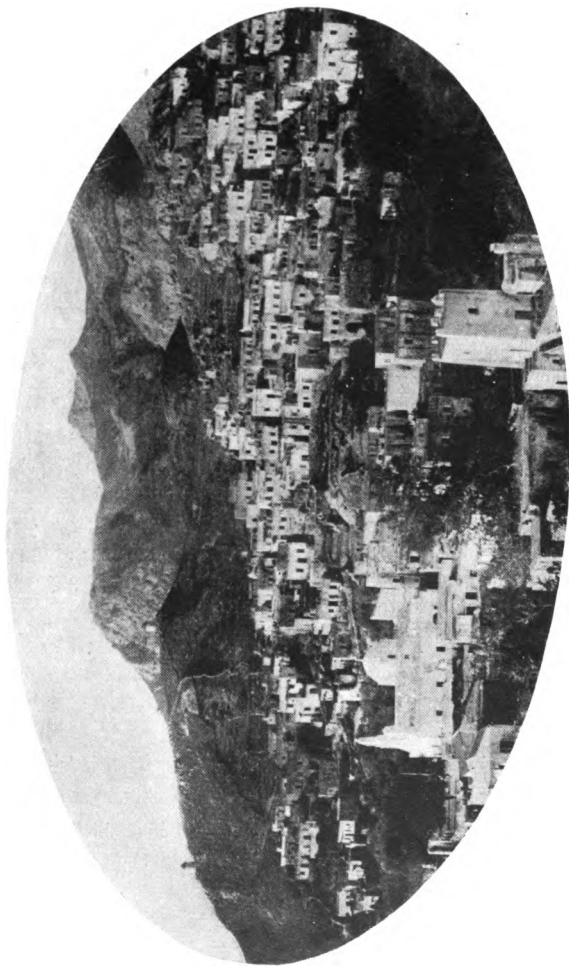
inclined to be dishonest. Their ignorance lays them open to exploitation by middlemen, often agents of Piræus firms, and through untimely hoarding or selling out of their produce they often come poorly off with their year's production.

The mines and the wealthier landowners export their products direct, so that little commerce is centred in the capital. Its people show little energy, and the level of intelligence throughout the island cannot be said to be high. Naxiot women and some of the men emigrate, the former being well known in Greece as nurses. There is a fairly numerous Roman Catholic community in the capital, and many of the names recall Venetian families of distinction, but the Italian language is extinct.

Náxos (pop. 1,885, P. T. O., C. H., gendarmerie headquarters for Náxos, Páros, and Antíparos) is the capital, and the seat of a Greek bishop and a Roman Catholic archbishop. The town is situated at the north-east entrance of the only considerable bay on the island on an open roadstead slightly improved by moles. A conical hill, crowned by a fine Venetian castle—still largely intact and occupied by the Roman Catholic priesthood—has collected most of the township on its steep sides, but the houses spread out at its base on the north and west along the shores. The town is crowded and unclean; the streets are steep, narrow, and dark, and living conditions generally unhealthy. The shops are poor, little trade is done, and the place in no way reflects the wealth of the island. Besides a Greek school, there are clustered around the archbishop's palace (in the castle on the hill-summit) a secondary commercial school for boys and a high school for girls, both Roman Catholic institutions of high standing, drawing pupils from all over Greece and ranking with those of Ténos, Syra, and Théra.

The population is distributed pretty well over the whole island, but in the barren parts towards the south and south-east are only isolated herdsmen's huts. The villages are generally large, and can be distinguished as agricultural, cattle-rearing, fruit-growing, or mining settlements, and form roughly local groups.

PLATE II



NÁXOS : PHILÓTE VILLAGE

(To face p. 123)

In the agricultural and garden area south and south-west of the capital is a group of villages mostly situated on slopes around the plain. The most important of these are Trípodēs (pop. 767), Agersaní (pop. 655), and, farther south, Sangrí (pop. 570, P. T. O.), besides smaller ones, such as Glýnados and Galanádōs.

Orchard villages are : Mélanēs (pop. 519) buried in a north-western gorge amidst orange, olive, pomegranate, and cypress groves ; Éngares (pop. 574) in a plain surrounded by hills in the north-west ; it is one large orange grove divided by hedges of bamboo-reeds ; Potamía, a hill-side village surrounded by fruit-tree groves and cypresses and with numerous springs ; and Komiaké (pop. 1,340, P. T. O.) situated on a steep hill-side in the north-eastern mountains ; at its foot lies a fertile wine and fruit-producing valley, and it keeps also considerable herds of goats. The most thickly inhabited area is Trageía, an olive-producing district. This basin contains twelve small villages, the largest being Damarionás (pop. 799), but the district comprises : Philóte (pop. 1,800, P. T. O.), close under Mt. Zeus ; Knýdaros (pop. 590) ; and Móne (pop. 470). The high-lying villages (e. g. Skádo, pop. 630) are mainly occupied with cattle-rearing.

Lastly there is the mining district of the north-east. Here is Vóthri (pop. 1,008, P. T. O.), a miserable village in a desolate glen. Below the eastern ridge of Phanári is **Apeíranthos**, the largest town of the island (pop. 2,200, P. T. O.). Built townwise and solidly on a steep slope (alt. about 2,000 ft.) it is cleaner, healthier, and has a sturdier population than the capital. It is interested also in agriculture and is noted for its excellent wine. Its port is Moutsoúna, but a track to the capital (12 miles) leads over the main ridge and down the western valleys.

Harbours

The island possesses no good harbours. The bay of Náxos, on the central west coast, is the most used. It is semicircular, about $1\frac{1}{2}$ mile wide, $\frac{3}{4}$ mile deep, is contained between Moungrí

Point, with Mt. Strongyló (alt. 500 ft.), on the south-west and Bacchus Isle, with its corresponding promontory, on the north-east, and has a large salt lagoon at its south end. The western and southern shores are rocky and shallow. Near the town is a sandy beach, partly built up with a quay, but with only enough water within a cable for small sailing craft. The usual anchoring-place for larger vessels is in 6-7 fathoms about $\frac{1}{2}$ mile west of the town, in a position exposed to the north and subject to a swell. To the north-west of the town lies Bacchus Isle, a rocky knoll lying off a small rocky promontory. Advantage has been taken of this to join Bacchus Isle with the promontory by a mole, and two other moles have been built at right angles—one from the west of Bacchus Isle and one west from the promontory—enclosing two small harbours. In these is accommodation for several small sailing craft with shelter from the north-west, and here are a light railway and loading facilities for emery ore.

Prokopé bay, south of Náxos bay, affords anchorage in north winds but is very open, while several of the inlets on the south coast will serve as temporary shelters under similar conditions. The only anchorage on the east coast is Moutsouína, sheltered from the north and useful in offshore winds, the other inlets of this coast (e.g. Leónas) being unsafe in north-east winds, though used as ports by the emery-boats.

Communications

Five vessels per week of the Greek island steamship lines call at the capital and one a week at Apóllon (to the north-east), an emery port. These all connect outwards with Íos and Théra and inwards with Páros, Syra, and Piræus. Once weekly a boat calls as well at all the islands of the two southern series (except Mélos), including Herákliá and Donóusa. The emery-boats, though irregular and uncomfortable, will also take an occasional passenger. They sail from Apóllon and Leónas bays on the north-east coast.

The main telegraph line from Syra and the mainland reaches Náxos via Páros, and from Náxos proceeds to the southern

islands through Íos and to the south-eastern islands through Amorgós. A land line connects the capital with the Trageía district, and there is telephonic communication with Páros and internally between the capital and most of the important villages of the island.

Communication inland is, with one exception, by tracks. In the more level parts these tracks tend to be sandy, while in the mountains they are exceedingly rough and steep. The ascents to the mining districts from the eastern side of the range are most trying, and the only passes are about 2,000 ft. high. Transport is by means of pack-animals, and the island contains large numbers of donkeys and mules. The emery mines possess some small carts. One road of 9 miles leads from Náxos to Sangrí : it is broad and in most parts in good repair. After Sangrí it is steep, and, like other routes leading through the Trageía district to the mountains, becomes a track.

NOTE ON TWO ROCKS

Between the Central and the Northern Central Series are the two dangerous rocks, Mérminga and Náta, both lying near the direct route between Paroikiá and Syra harbours. The former is about 10 miles north-west of Páros and presents a glistening marble cliff towards the south. Náta lies low and black 8-10 miles south-east of Syra.

(E) SOUTHERN DIAGONAL SERIES

(PHOLÉGANDROS, SÍKINOS, ÍOS, ISLANDS BETWEEN NÁXOS AND AMORGÓS, AMORGÓS, ISLETS NORTH-EAST OF AMORGÓS)

The Southern Diagonal Series consists of a chain of relatively small but high islands and rocks which sweeps from Pholégandros (12 miles east of Mélos) in a north-easterly direction past the south-east coast of Náxos. Towards the north-east (after Íos) the chain bifurcates and has thus as a whole the appearance of a two-pronged fork pointing east-north-east, of which the handle is composed of the islands Pholégandros, Síkinos, and Íos, the left prong of Herákliá, Schinoussa, and other small isles to the east and north-east of Náxos, and

the right prong of Amorgós and the rocky islets which prolong it towards the islands on the Asiatic side.

This series is a link between the southern Cyclades and the islands and coasts of south-west Asia Minor, and it is parallel to the more northerly and much more substantial link formed by Mýkonos, Ikária, and Sámos. This fact was realized in ancient times and was made use of by mariners. It also shows some geological evidence (in Amorgós) of its connexion with the Asiatic coasts. The general lie of the individual islands is from south-west to north-east, though Pholégandros and Íos lie nearly at right angles to this.

In climate and natural features these islands—as indeed all the southern islands—have much which distinguishes them from the northern Cyclades: the climate is milder and warmer, there is less rain but considerable moisture in the atmosphere, so that both wheat and cotton can be grown. The series as a whole is not rich in either agricultural or mineral resources, and as a consequence cattle-rearing is more important than either. The inhabitants do not display as much energy as those of the northern Cyclades. This is perhaps due to the comparative isolation of the group, an isolation which, if these islands did not lie on the route between Syra and the rich island of Théra, would be even more pronounced.

PHOLÉGANDROS (POLÝKANDRO)

Area: $12\frac{1}{2}$ square miles. (Length: 7 miles. Maximum breadth: $2\frac{1}{2}$ miles.)

Population: in 1907, 962. (In 1896 it was 998.) Population per square mile: 77.

Products: wheat, barley, wine, beans.

Physical Features

The most westerly of this series, and situated 12 miles east of Mélos, Pholégandros is composed of two oval-shaped tablelands lying end to end and joined by a lower neck about 1,100 yds. broad. The longer axis of each oval lies north-west to south-east, and the lie of the whole island is thus nearly at

right angles to the main direction of this series. The two bays on either side of the central neck—Ankále bay on the south and Voriná on the north—form, with Karavostási bay at the south-east end of the island the only openings of importance.

Of the two tablelands that in the eastern half is higher, reaching over 1,350 ft. at Mt. Hágios Elefthérios in the north-west corner. Its average elevation, however, is rather under 1,000 ft., and it is cleft on the north along the length of the oval (i. e. north-west to south-east) by a depression, leaving a sharp ridge, Palaiókastro, about 1,000 ft. high, running close along the north coast. Except for the bay of Karavostási, into which debouch several ravines, the edges of the tableland in this southern half approach the coast closely all round, and fall everywhere from an altitude of 650 ft. and often from 1,000 ft. within 200 yds. to the sea. Such uniformly precipitous cliffs exist perhaps nowhere in the Cyclades except on the inner coast of Théra. The north-western oval (Apáno Meriá) is lower (average elevation about 700 ft.; highest point, Mt. Merovígli towards the north-east, 1,030 ft.), and the tableland which occupies its bulk has much gentler seaward slopes, especially on the south, and admits of numerous tiny ravines. The isthmus connecting the two halves is only 446 ft. high. There are no streams, and only two valleys (one opening on Ankále bay and another, called Livádi, opening on Karavostási bay) contain cultivable soil, the remainder being exceedingly stony.

There are no heights to attract much rain, and the water-supply, especially in the eastern half, is scanty: there is one spring near the capital, but this latter relies mainly on water collected in cisterns. The western valleys contain more springs, but the climate is dry and hot enough for wheat, though cotton also grows. The Livádi valley is reputedly unhealthy.

Geology

The island is composed of three main layers: (1) uppermost and forming most of the surface and all the heights and ridges of the eastern half, is a thick mass of white or greyish-blue

marble; (2) below this, and forming the greater part of the western half, are schists, prevailingy epidote mica schist; (3) lower still, and appearing along the southern coastal area of the western half, is a marble complex. Around and east of the capital along the south shore of Voriná bay yellow tufaceous limestone and limestone schist occur at a height of nearly 700 ft., and the Livádi valley follows a schist layer.

Vegetation, Cultivation, and Industries

The two halves of the island are culturally distinct and present a remarkable contrast. The eastern or marble half is mostly covered with phrygana scrub, and serves only to pasture sheep, goats, and mules, though the two valleys, Livádi and that opening on Ankále bay, have fields, vine and olive plantations, and on the uplands near the capital are scanty cornfields. This half is unproductive, but in the western or schist areas are numerous well-watered if diminutive valleys, and on the carefully terraced slopes rich harvests are gathered. Vegetables grow in the valleys, and barley, wheat, and beans, and a little cotton are raised on the slopes by rotation in succeeding years. A few figs and edible prickly pears grow on the terraces, and on the south side olives producing first-class oil abound. The agricultural products are of high quality, though limited in quantity (e.g. the total amount of corn (wheat and barley) grown is estimated at 12 tons); together with the meat, milk, cheese, honey, and the little wine produced on the eastern half they barely suffice for the inhabitants, but cattle to the value of £400-£600 per annum are exported. The island abounds in game, which is used as food. The women make cloth from cotton and wool, and plait straw baskets. The men engage in agriculture, cattle-rearing, and a little fishing, and many men and women emigrate.

Inhabitants, Population, and Settlement

As regards its settlement Pholégandros is in a transition stage (cf. Kéos). The capital is the only town, and it con-

tains nearly all the population of the eastern half of the island. Scattered over the western parts are rude single-roomed stone huts, sometimes with barns and sheds attached. Originally temporary shelters, they are now permanently occupied.

The islanders are reputed to be quiet and hospitable, and crime is practically unknown. Though numerous Italian names, semi-grecized, are reminiscent of the strong Venetian influence of the Middle Ages, the Roman Catholic religion and the Italian language are extinct. The island population is surprisingly well-to-do and modern in habits and tastes. This is largely the result of emigration: the emigrants, who are numerous, either return to their homes wealthy or send back money to their folks.

The capital, Pholégandros (Chóra; pop. 534, P.T.O.), is situated near the north of the eastern half of the island at the head of the depression leading up west-north-west from Karavostási harbour. Just here the plateau breaks off in an almost sheer 1,000-ft. cliff upon Voriná bay. Reaching right to the cliff edge (down which a zigzag path leads), and having on two sides (south and north) the highest peaks on the island (Mt. Hágios Elefthérios and the Palaiókastro ridge), the township with its front and back approach was a place of refuge in earlier times. Near by are remains of the ancient fortifications, and the present town lies in and about the ruins of a massive Venetian castle on a low hill. Its fairly wide marble-paved streets, frequented by pigs, lead between low, flat-topped, and closely set houses, among which are numerous better dwellings belonging to returned emigrants. The town depends upon rain-water, but there is one spring which waters some vegetable gardens.

Harbours

Karavostási bay, though it has no settlement, is the regular landing-place, and a track (1½ mile) leads up a barren ravine to the capital. The entrance is about 2 cables wide; there is a pier as well as a sandy beach, and the depths vary from

16 fathoms to 5 near the pier. Loading is done by small boats, but this bay, as also Voriná bay, is exposed to the north-east. Ankále bay on the other hand offers shelter from the north-east, has 5-20 fathoms, and small boats for loading, but no mole or pier. In Voriná bay the water is very deep, and there are no conveniences for either landing or loading. None of the harbours are good, the lie of the island being against this.

Communications

A line of Greek island packet-steamers calls weekly at Karavostási bay and connects outwards with Íos, Théra, and other of the south-eastern Cyclades, and with Náxos, Páros, Syra, and Piræus inwards. There is telegraphic connexion through Síkinos and Íos with the main central line (Páros, Syra, &c.), and telephonic connexion with Síkinos. The island tracks are rough and narrow, and transport is by means of mules and asses.

THE ISLETS BETWEEN PHOLÉGANDROS AND SÍKINOS

In the six-mile stretch of water between Pholégandros and Síkinos is a chain of small marble rocks. The first of these lies immediately off the mouth of the Livádi valley; next (2 miles north-east) are the twin rocks of Karapothíá, called Dýo Adélphia, rising to over 300 ft. Midway between these and the nearest (south-western) point of Síkinos is Kardiótissa, the largest, which contains an elongated marble hill about 500 ft. high. Steep-sided but gentler towards the south it has at this end a landing-place by which the people of Pholégandros occasionally put small animals on shore to pasture. It also abounds in rabbits, which are sometimes hunted for food. Close beneath the south-western end of Síkinos are the rocks Kalógoros and Karávos.

SÍKINOS

Area : 16 square miles. (Length : $7\frac{1}{2}$ miles. Average breadth : 2 miles.)

Population : in 1907, 627. (In 1896 it was 697.) Population per square mile : 39.

Products : olive-oil, honey, cattle, in small quantities.

Physical Features

This cigar-shaped island, whose greater axis lies along the main line of this group (south-west-north-east) and whose thinner end points south-west towards Pholégandros (about 6 miles distant), is the most inaccessible of the Cyclades. Though its coasts are neither steep all round nor so rock-bound as those of Pholégandros, the absence of important inlets, the height of its mountains, and the sudden squalls which sweep down now on this side and now on that make it extremely difficult of approach.

In physical structure it bears a striking resemblance to Ándros, though of course on a smaller scale and set at a different angle. Close above the north-west coast throughout its length rises an extremely steep ridge with an undulating profile, highest near the middle, where is a peak of 1,720 ft., and sinking in height gently towards the north-east, more abruptly towards the south-west extremity of the island. On the north-west are some extremely high and steep cliffs (1,500 ft. in one place). The south-east face of this ridge presents as a whole a much gentler slope to the sea and has been eroded by torrents into a number of lateral spurs running at right angles across to the south-east coast. The middle one of these lateral ridges (cf. Mt. Pétalon in Ándros) is much the highest, and rises near its south-east end in Mt. Hágios Mammás to almost 2,000 ft. The north-west coast of Sikinos is remarkably straight, but, unlike Ándros, the south-east coast has no considerable bays, for, in spite of the relatively long stream-courses which flow to this coast from the main watershed, only Málta (north-east corner) and Alprónia (central east) bays deserve the name, and the island has practically no valleys. The ravine which

debouches on Alprónia bay, and at the head of which the main ridge dips to 885 ft., forms a depression which may be said to divide the island into halves.

Geology

Síkinos shows a continuation of the geological features of Pholégandros. The lower marble complex and the limestone formations of the latter do not appear, but the same schists (mica and epidote) form the lowest layers (appearing mostly in the north, north-west, and in the deeper ravines), and these are overlaid, especially in the south and south-east, by what in Pholégandros is the upper marble mass. Above this, however, in Síkinos are alternating layers of schists and marbles, and, unlike Pholégandros, the structure of the island as a whole is such that schists and marble come to the surface in alternating strips, causing a succession of fertile and infertile zones, the marble areas on the whole predominating.

Cultivation and Industries

Síkinos is not a productive island, but the best has been done in the circumstances. The soil is poor; water and wood are scarce; irrigated gardens do not exist, and the population depend upon rain-water for drinking purposes. Nevertheless the climate is moist, and, as in others of these southern islands, plants (including cotton) seem to live mainly upon moisture derived from the air. The valley-sides also, even in the marble areas, are terraced and cultivated to the limit of possibility.

The chief products are honey and wine, for which alone the island seems to have been known in antiquity, but the fields and terraces are mostly sown in rotation, as in Pholégandros, with corn, beans, and cotton, and scattered over the fields and slopes are olive and fig-trees, while on the more barren heights are scanty juniper and stunted lentisks (*Pistacia Lentiscus*), and here game (red-legged partridges) abounds. Cattle-rearing is less important than on Pholégandros, but a few goats, sheep, and calves are exported.

For the most part the products merely suffice for the needs of the islands, but the small quantities of wine, olive-oil, cheese, honey, and live-stock exported pay for the flour and other provisions required. The nature of their coasts prevents seafaring, and the island possesses hardly any craft.

Inhabitants, Population, and Settlement

The people of Síkinos are said to be pure Greeks of Cretan origin who fled from Turkish oppression. They are simple, poor, and frugal. Isolated by force of circumstance they have never emerged from their primitive seclusion and display little enterprise. The population is concentrated in the capital, Síkinos (Chóra ; pop. 627, P.T.O.), which is situated in the large dip in the main watershed at the head of the chief central valley mentioned above. Like Pholégandros, it lies at the edge of a steep descent to the north coast, and thus, by means of the heights on either side of it, commands a far view and is a place of safety. Though once translated to an even securer position on the ridge farther south, the present capital—consisting of two settlements—clusters in and round a massive mediaeval fortress, but has otherwise none of the impressiveness or prosperity of Pholégandros. The island contains many churches, but outside the capital are only a few huts, which are not permanently occupied.

Harbours

It is the absence of harbours which accounts for the isolation of Síkinos. None of its inlets are sheltered from the prevailing winds, and vessels have to be ready to sail, if the wind shifts, at a moment's notice to the other side of the island or even to put out to sea if the gale sweeps down over the lee shore. The bay of Alprónia (about central east) is that mostly used by visiting steamers and is the port of the capital. Sheltered from the north, it has an anchorage for both steam and sailing vessels and 15 fathoms at a distance of 300 yds. from the shore. The bay of Málta at the extreme north-east is safe in southerly winds and has depths about the same as Alprónia. On the

north coast is the bay of Hágios Elefthérios, where steamers can find shelter from north-east winds but no anchorage owing to the depth of the water.

Communications

A weekly service of Greek island steamers connects Síkinos with most of the neighbouring islands and with Náxos, Páros, Syra, and Piraeus inwards. In bad weather, however, these boats do not call, and the island is often isolated for long periods. This lends additional value to the telegraphic cable which makes connexion with Pholégandros and Íos and through the latter with Théra and Syra. There is telephonic communication with Pholégandros. The island tracks are rough and difficult, and transport-animals (asses and mules) are few.

Íos (Nió)

Area: 46 square miles. (Length: $10\frac{1}{4}$ miles. Maximum breadth: $4\frac{3}{4}$ miles.)

Population: in 1907, 2,090. (In 1896 it was 2,146.) Population per square mile: 45.

Products: corn, barley, beans, wine, olive-oil, cheese.

Physical Features

Lying athwart the main direction of this group, rather over 3 miles east-north-east of Síkinos and 11 miles south-west of Náxos, Íos forms a rough parallelogram whose longest sides (about $7\frac{1}{2}$ miles) lie north-west-south-east and the shorter (about $4\frac{1}{2}$ miles) north-south, while the extreme north and south angles are cut off to form smaller stretches of coast running roughly east-west. The coasts are everywhere less steep and closed than those of the two preceding islands and admit numerous inlets, such as those of Bouílitho, Theodóri, Psáthe, Kálamos, and Toú Luká Avláki ('Luke's Cove') on the north and east, Manganári on the south, and Kléma, Mylopótamos, and Laimós on the west. Between the two latter and just below the west angle of the parallelogram is the only important harbour, Íos bay, so called from the proximity of

the capital. Besides those mentioned there is a multitude of smaller coves, except on the north-west coast, which is steep and straight.

The mountains lie, if anything, more towards the north-east, but they are irregularly placed and fall into four groups corresponding to some degree with the geological groupings. In the north-west is a broad convex mass of hills rising to 1,384 ft. ; triangular in shape, its base rests on and along the north-west coast and presents a steep straight front to the sea. The apex, directed east, is at Hágios Demétrios pass (alt. 876 ft.), where it joins the hill mass next to the south, that of Hágios Elías (alt. 1,650 ft.). This is a flattish cone situated $2\frac{1}{2}$ miles east of Íos bay and sending one spur northwards to the above-mentioned pass and another, and smaller, terminating in a conical hill, towards the south-west. On this conical hill stands the capital. These two hill masses together with their spurs form an almost circular framework enclosing the principal plain and harbour of the island. East-south-east of Hágios Elías and connected with it by a saddle is the greatest mountain mass of the island, occupying nearly the whole of its central and eastern parts. This is Mt. Pýrgos, a broad flattened uneven-topped oval mass whose highest elevations reach 2,352 ft. and 2,410 ft., and whose sides, especially on the south and south-east, fall away steeply and are bitten into all round by deep ravines. South of this stretches away a wide, rough, and rocky tableland without striking features and occupying all the southern part of the island.

Numerous gorges and ravines furrow the sides of these hills, without, however, as a rule forming considerable valleys, though the bays have often beaches and small plains at their head, isolated from each other by bare hills. The oval depression at the head of Íos harbour and enclosed by northern and north-eastern hills is the most considerable valley. Formed by the convergence of several stream-courses and not quite uniform for that reason, it possesses water even at midsummer and is the largest cultivable area. It is connected by means of passes with minor valleys of the same sort on the north and north-

east coasts, but in these, as in most others, running water is scarce, and springs mostly disappear before they reach the coast.

Geology

The rocks of Íos, both in their character and in the manner of their occurrence, suggest considerable affinity to those of Náxos. The southern portion of the island, as far north as Kálamos bay on the east and Kléma bay on the west, consists almost entirely of a mass of gneiss granite which weathers out in large blocks. It is seamed with quartz or quartz-aggregates, which decompose and strew the surface with rough boulders and splinters. The central western part of the island is occupied with a gneiss region, while to the north and north-east the prevailing rocks are schists (mica, epidote, and hornblende schists) with, in the north-east, three inconsiderable layers of grey or greyish-blue marble. Towards the middle of Íos, where schists and gneiss meet, is a transition zone, where the schist-gneiss takes in more and more of the softer northern schists. In the north (near Hágios Demétrios pass) fragments of emery stone and magnetite lie strewn over the surface in great quantity.

Vegetation, Cultivation, and Industries

Wild vegetation is scanty: oleanders grow densely about some of the stream-courses, and a few stunted junipers and phrygana scrub grow on the hills, but the highlands are often quite bare.

Íos is the least productive for its size of the Cyclades, the reasons being partly physical and partly economic. Though it has a moderate water-supply, a great part of it is composed of the most infertile rocks, and what good land it possesses is mostly in the hands of larger owners, and is not intensively or energetically worked. The fertile areas are mostly small and isolated, especially in the south; in the north and at other places around the coasts the valleys are often terraced and grow vines, olives, and corn (barley or *smigádi* = barley

and wheat mixed). The most considerable fertile area is the plain around Íos harbour, but here particularly, where intensive cultivation would be possible, lack of personal ownership discourages industry.

Wine, honey, olive-oil, grain (wheat and barley), beans, and tobacco are produced in moderate quantities. Cattle-rearing is more important than agriculture, and the island has flocks of sheep and pigs and some herds of cattle. The island cheese (*miséthra*) is noted, and cheese, a few sheep and oxen, barley, and wine are exported.

The magnetite ores of the north-east appear to have been worked, but mining has now ceased.

In spite of their many bays the inhabitants resign fishing and seafaring to a few immigrant Spetsiots. The surplus population and the more enterprising men and women emigrate, and these emigrants equal in number nearly half of the population.

Inhabitants, Population, and Settlement

The population seems in ancient times to have been scattered in the small fertile spots pretty well about the island, but only a few houses now exist in each of these places, and most of the people live in the capital. This, Íos (pop. 2,000, P.T.O.), is built on the southern and eastern flanks of a conical hill (about 300 ft. high), which is the termination of the south-western spur of Mt. Hágios Elías. Along this ridge are numerous windmills, and there are remains of a mediaeval fortress. The ancient capital with its acropolis seems also to have occupied this site. Commanding the fertile depression to the north and the harbour below, the town has a wide view of the islands to the south and west, and is well built. Its paved streets, numerous churches, and fine mayor's house make a good impression, but the presence of pigs in the streets is disconcerting. The islanders were for long centuries under the dominion of strangers—the Dukes of Náxos, Venetian nobles, Turks—and family names still recall the Italian element, though the Italian language and the Roman Catholic religion have disappeared.

Harbours

Most of the bays mentioned above are useful only in favourable weather, being exposed to one or another of the prevailing winds. Manganári bay on the south coast affords temporary shelter in northerly winds and has 10–15 fathoms over a sandy bottom. Íos harbour on the other hand is one of the safest and roomiest in the Cyclades, though its entrance is somewhat narrow and difficult of approach. Nearly a mile deep and $\frac{1}{4}$ mile wide it opens towards the south and has from 20 fathoms at the entrance to 5 fathoms near the sandy head; it takes a bend about the middle so that even south-west winds and swells do not penetrate. It is surrounded by hills and gives access to a fertile and well-watered district, and the small port on its eastern shore is connected by a fair track $\frac{3}{4}$ mile long with the capital. Though it lies near the main route from the mainland to the southern isles and Crete, Íos harbour is now mostly used only as a place of occasional refuge, except by the island steamers.

Communications

Íos is conveniently situated on the route from Páros and Náxos to Théra, and it therefore has a steamship service out of proportion to its real importance. Five boats of Greek island steamship lines call at the harbour of the capital weekly, all of which make connexion outwards with Théra and with Náxos, Páros, Syra, and Piraeus inwards, and one also with the neighbouring islands of Síkinos and Pholégandros and with others of the southern Cyclades.

Íos is connected by telegraph with Théra and with Syra through Náxos and Páros, and a branch line runs to Pholégandros and Síkinos. The interior tracks are not so difficult as in some islands owing to the rounded features of hill and valley. Transport is by mules and asses. There is said to be a dilapidated light railway connecting the villages of the north-east coast. This would no doubt be in connexion with the disused mines in that area.

SMALL ISLANDS BETWEEN NÁXOS AND AMORGÓS

The direct north-eastern continuation of the Southern Diagonal Series consists of a group of small islands and rocks including Herákliá, Schinoúsa, Kéros, Antíkeros, the Kouphonesiá followed at a greater distance north-east and due east of Náxos by the small Makariaís group and Donoúsa. Besides these there are numerous islets and rocks, which, with the exception of Kopriá—which forms a link between Apáno Koupho and the more remote north-eastern islets (Makariaís and Donoúsa)—need no special mention. The whole archipelago—called Eremónesi—belongs to Amorgós, and, though nearly all the islands give evidence of having been occupied in antiquity, they were latterly uninhabited, but have mostly been again peopled from that island.

The largest ($9\frac{1}{2}$ sq. miles) and also the nearest to Íos ($6\frac{1}{2}$ miles interval) is Herákliá (Rákliá), a roughly triangular islet about 4 miles due south of Náxos. Composed of marble, with possibly gneiss and emery also appearing, it contains a rocky elevation which falls steeply on the south but more gently towards the north. The coast contains several inlets capable of serving as havens of refuge, the best being on the east. On the north coast is a large sea-cave, and inland a good spring. Originally covered with thick scrub, a good area has now been cultivated by the 235 inhabitants (in 1907), the land belonging (as do Schinoúsa and Kéros) to the monastery of Amorgós, which has a *metóchi* there.

Next (about $1\frac{1}{2}$ mile north-east) comes Schinoúsa (4 sq. miles), a low ragged-edged islet probably of marble, whose name is derived from *schínos*, the pistachio shrub (*Pistacia Lentiscus*), which abounds there. There were, in 1907, 201 inhabitants including a *metóchi* from Amorgós, and the island contains a spring and terraces and other signs of ancient cultivation.

Kéros (8 sq. miles), 4 miles east of Schinoúsa, is a high barren marble or limestone rock serving only to pasture goats and without settled inhabitants, while $1\frac{1}{2}$ mile south is Antí-

keros, composed of two small and low islets (together $3\frac{1}{2}$ sq. miles) lying between Kéros and the south-west end of Amorgós.

In a line north-east ($1\frac{1}{2}$ mile) from Schinoúsa and about equidistant from Kéros on the south-east and Náxos on the north-west lie the two islands—nearly joined—called Apáno and Káto Koupho or the Kouphonesiá (together about 7 sq. miles). Composed of schist (with possibly chalky marls), they are fertile and well cultivated, and contain two villages, one on each island, with (in 1907) 204 inhabitants in all. The sheltered water formed by the concurrence of the two islands forms a very fair harbour, protected from north-east and south-west, in 6–8 fathoms over sand and has the village on either island in the proximity.

A gap of nearly 10 miles (occupied only by the rock Kopriá) intervenes between Kouphonesiá and the Makariaís group, which lies $3\frac{1}{2}$ miles due east of the Moutsoúna promontory of Náxos, and consists of three low rocky islets, together only about 1 sq. mile. They are of interest only because of the occurrence upon them of yellowish-white limestone reported to be of good lithographic quality. Such deposits, though occurring in other parts of western Greece, are too small to be profitable industrially, and this deposit may be of commercial as well as of geological interest. The islets contain a few inhabitants.

Donoúsa, which lies about $4\frac{1}{2}$ miles east-north-east of the Makariaís and 10 miles east of northern Náxos, is the most important of this chain of small islands. Irregular in shape, with long straggling promontories on the west and north and several fair-sized bays on the north-east, north-west, and south-west, it has an area of roughly 8 square miles. It is occupied by a chain of rounded but stony hills running south-east–north-west close along the north-east coast and terminating, after a dip, in the lower northern table-like peninsula. The highest point (1,600 ft.) lies in the north (just south of the neck of the peninsula mentioned) and towards the south-west the chain sends off spurs separated by valleys trending southwards to the coast. The north coasts are therefore

steepest and are mostly girt by precipices in places 800 ft. high. On the south-west are softer features and a few small alluvial plains, but even here the coasts are mostly backed by hills.

The island is composed mainly of stratified (metamorphic) limestone (cf. Náxos), interbedded with mica schists in layers of varying thickness. The limestone is sometimes reddish and sandy, but the greater part appears to be marble. The schists contain ores in workable quantity (see below).

The vegetation is scanty, consisting mainly of low phrygana scrub and some scattered junipers, but the island has a bare appearance. The greater part is uncultivated, serving as pasture, but in the valleys, upland hollows, and delta-plains towards the south is arable land in fair extent. Here vines, olives, figs, almonds, and other fruits grow, and in the richer spots vegetables (potatoes, tomatoes, onions), besides tobacco and reeds (see p. 77). The barer parts have scanty cornfields. Around the gardens and fields and dividing cultivated from the higher pasture-lands are low stone walls, and a few date-palms and cypresses lend variety. The island has about 30 horses, 30 asses, 100 head of cattle, 600 goats, and 400 sheep.

In 1908-9 mining operations were carried on in the western hills ($\frac{1}{2}$ mile north-north-east of Stavrós bay), and zinc, calamine, and copper ores were mined and exported—about 700 tons in the 2 years.

Donoúsa in 1909 had about 220 inhabitants, who were distributed in four hamlets, the largest of which, Stavrós, lies at the head of the bay of that name in the south-west, scattered over the hills facing the sea. The other hamlets, Kalotaritíssa (in the north), Mersyné (south-east), and Messariá (central south), have only a few houses each. The island was used as a penal settlement by the Romans. There is fair shelter in the various bays, but these are all exposed to one quarter or another. The best haven is behind Trígono islet in Roussa bay on the north-east.

The last appearance of this chain to the north-east is the Voídi ('Cattle') rocks, a group of sheer bare rocks about 400 yds. long, 185 ft. high, and lying 9 miles north-east of Donoúsa.

Herákliá and Donoúsa are the only islands among these visited by Greek island steamers, a vessel calling once a week at each of them and connecting them with Amorgós, Théra, and the other islands of their series outwards and with Náxos, Páros, Syra, and Piræus inwards. The others are to be reached as a rule only by sailing craft, and there is no telegraphic or telephonic communication.

AMORGÓS

Area : 50 square miles. (Length : $20\frac{1}{2}$ miles. Maximum breadth : $3\frac{3}{4}$ miles.)

Population : in 1907, 4,140, including the small islands belonging to it (see above). (In 1896 it was 3,721.) Population per square mile (Amorgós alone) : 67.

Products : corn, olive-oil, tobacco, cotton, live-stock.

Physical Features

Some 15 miles south-east of Náxos and rather off (east of) the main line of the Southern Diagonal Series is the largest member of it, Amorgós, a long thin island curiously like a comb lying south-west-north-east with its back towards the south-east and the teeth—in this case blunt ragged promontories—running out north-west.

The back of the comb is formed by a single long and narrow ridge which, though towards the north it juts out in a sharp easterly projection, otherwise runs straight along and hard above the south-east coast. At either end it curves to the north-west to form, as it were, the outer or end teeth. The south, south-east, and north-east coasts are therefore fairly straight, closed, and steep, there being nothing more than the above-mentioned north-eastern projection and a few tiny inshore rocks to indicate former irregularities. On the north-west on the other hand, where the face of the ridge is much gentler and eaten out by torrents into numerous spurs, is a varied and ragged coast-line. On this side the teeth of the comb have partly been broken off so as to leave three main blunted projections—one at either end and one in the middle—and in two places they are missing altogether, the gaps form-

ing two large bights between the three main promontories. Each of these promontories thus forms a thicker block and is occupied by a higher elevation, while opposite the gaps the ridge is extremely narrow (at one place towards the north only about 1 mile from coast to coast). The ridge as a whole consequently has an undulating profile and, rising to 1,890 ft. in Mt. Kórakas at the south-west end, to 2,175 ft. in Mt. Prophétes Elías at the middle, and to 2,560 ft. in Mt. Kríkelas near the north-east corner, sinks between these elevations to broad saddles with numerous minor peaks.

Of the two large bights of the north-west coast, the lower (the south-westerly) is the more irregular, its semicircular general outline being broken into by many smaller ragged bays, the chief and best-known of which is Katápola bay or Port Vathý, the harbour of the capital. The north-eastern bight, called Kakopérato, is much shallower and more regular; at its north-east corner is the rounded bay of Giále (Aigiále), important in the development of the northern part of the island. Besides these there are numerous other indentations, and the irregularity of this side is accentuated by several off-lying rocks and small islands, notably Grabóusa off the south-west corner and Nikouriá and Grabonési about the middle of Kakopérato bay.

The island is too narrow for streams, but both Giále and Katápola bays have at their head small semicircular alluvial plains formed by the confluence of glens from the surrounding hills. That of Katápola is the most fertile and important. There is a third plain in the south-west—a longitudinal depression between Mt. Kórakas and a coastal ridge—called Kolophána, which is waterless but fertile. Owing to the shape and structure of the island each of the two northern plains mentioned, and to a less extent the south-western one also, forms a distinct centre of culture and settlement, isolated from the others by the heights and ridges mentioned, and the island is sometimes spoken of as though it were three distinct islands, named Katomeriá (in the south-west), Amorgós (middle), and Giále (in the north-east) respectively.

The water-supply is not prolific: springs are somewhat scarce, and windmills on the ridges and wells in the valleys have to be resorted to.

Geology

The non-appearance of fully crystalline schists distinguishes Amorgós from other islands of the Cyclades. Green or yellowish argillaceous schists—at times black glistening slate into whose composition mica schist enters in varying degrees and which sometimes encloses quartz—alternate with grey-wacke and chalk schists throughout most of the southern and south-western area, and surround all the three alluvial plains mentioned above. Above these and forming the surface in all the central, north-eastern, and in part the south-western areas (thus of the greater part of the island) is a thick mass of blue-grey and mostly crystalline limestone.

The absence of fossils in both of the above main elements leaves their precise age uncertain, but the limestone (which is younger than the argillaceous schists) resembles the chalk formations of Chíos and Smyrna, while the former, which are undoubtedly sedimentary rocks little if at all metamorphosed, bear a strong resemblance to those of Skópelos and Chelidromía and perhaps of Chíos also and are possibly Palaeozoic.

Vegetation, Cultivation, and Industries

The natural resources and the industry of the people of Amorgós are alike moderate. The amount of cultivable ground is restricted, and the valleys are small and confined. Upon the limestone uplands and ridges is scanty phrygana scrub, swarming with partridges, and here too is purnaria (*pour-nária*) scrub (kermes oak, *Quercus coccifera*), while these trees, with lentisks (*Pistacia Lentiscus*), form green copses along the northern slopes of the Katomeriá. Mt. Krikelas in the north-east is said to have been covered a century ago with a forest of holm and deciduous oaks and junipers, which was destroyed by fire and has not revived.

The highlands support sheep, cattle, and goats (from the

milk of which cheese is made), and pigs are also reared. Cultivable soil is found only in the schist regions, the higher and barer parts being devoted to grain and bean production, while the lower slopes, which are usually well terraced, grow olives, vines, and some fruit-trees. Irrigated gardens are scarce, but the olives of Amorgós are of the small black variety which yield a plentiful and first-class oil. In particular the plain of Kolophána (in the south-west), which lies in a schist depression between limestone ridges, produces grain and vines, and in the north-looking valleys of the Katomeriá are olive groves with grain intermingled, as well as some fruit-gardens. The rich plains of Katápola and Giále and their surrounding slopes yield vines, olives, figs, cotton, and tobacco. The cultivation of the latter is important, and from September to April a considerable number of women and girls find employment in the tobacco-factories. The annual production amounts to about $\frac{1}{2}$ million lb. Besides this the coastal glens and slopes on both sides produce olives in smaller quantities. Olive-oil, tobacco, cheese, dried figs and beans, and live-stock are exported in small quantities, but for the most part the products only suffice for home needs, and the corn grown is sufficient only for four months.

Of interest is the umbelliferous plant (*Ferula communis*) grown here and in Crete from the stalks of which the women weave light hassocks; and in the orchil moss (*Rocella tinctoria*, Ach., and *R. phycopsis*, Ach.) of the coasts of Amorgós and Nikouriá some think they identify the source of the well-known dye of antiquity known as *amorgé*.

The women weave most of their own garments. Earthenware is made in the Giále district. The men, whose experience and skill in building stone walls and terracing are well known, serve abroad as masons and builders. The island possesses a relatively large fishing population with caïques and smaller boats. The seafaring life was revived by the Kasian immigrants of Katápola and is still largely in their hands, and these seamen have a reputation for smuggling (tobacco) and cattle-lifting. The natives are landmen little given to foreign emigration

and have not developed the full resources of their island, though they have colonized and worked the neighbouring islets to the north-west.

Inhabitants, Population, and Settlement

Of importance in remotely ancient days because of its position on the trade-routes to south-west Asia Minor, Crete, and Egypt, Amorgós preserves traces of extremely early culture. Its history, unusually chequered, has left upon it numerous landmarks (towers, town sites, &c.). The island was a Roman place of exile—one of the less severe. After the War of Independence refugees from Kásos colonized the bay of Katápola and founded the village of that name. But throughout its history the isolation of its various parts has remained, and even to-day this isolation and partition reveals itself in the different methods of settlement in the north and south, and is a political and economic disadvantage.

The centre of the southern section is the valley of Katápola, but in the Middle Ages the population sought safety by withdrawing to the present capital, Chóra (Kástro), which lies at a valley-head just below the summit of the main ridge south of Mt. Prophétes Elías, about the centre of the island. Overlooked by two steep rocks and the windmill-crowned ridge, and with access to the fertile valley and harbour below, the town with its well-built houses and streets and well-appointed shops and cafés has a prosperous appearance but contains only 854 inhabitants (P.T.O.) and has lost a good many in later years to the villages in the valley, viz. Rachídi, Xylokeratídi, and Katápola, both of the latter being on the harbour. Katápola contains a custom-house and is connected by telephone with the capital. These three villages contain between them 556 people.

In the Katomeriá are several small agricultural and garden villages, notably Chorió, Vroutsi, and Léfká, together having 577 inhabitants. In this area decentralization is going on as in Kéos and other islands, the process having reached the stage of hamlet-formation.

In the north on the other hand there are, besides numerous smaller settlements along the coast, several fair-sized villages grouped mostly on the heights and steep slopes around the Giále valley. Chief of these is Langáda (Aigiále or Giále; pop. 647, P.T.O., C.H.), besides which there are Pótamos (pop. 217) on the shores of the bay and Tholária (pop. 388).

To this population should be added that of the neighbouring islands to the north-west, of which Donoúsa belongs to Giále, and Herákliá, Schinoúsa, and Kéros to the famous convent of Chozoviótissa, which is built in the mouth of a cave in the south-eastern mountain-side, in a beautiful position overlooking the sea. South of this in a similar position are the remains of another monastery (Hágios Geórgios Valsamítes), near which is a spring famed for its magic healing properties.

It is noteworthy that the population of Amorgós, unlike that of most of the Cyclades Islands, is increasing. This is probably due to the smallness of emigration and the growth of the tobacco industry requiring much labour, both for cultivation and in the factories. The traces of Italian element survive only in a few family names, and Roman Catholicism has disappeared. The inhabitants are friendly, moderately well-off, but have no claim to distinction except it be on the score of the beauty of their womenfolk and the skill of these in artificially enhancing it.

Harbours

Amorgós possesses three harbours of fair capacity and safety. The best is Port Vathý, which, though open to the west, is surrounded by hills on the three other sides. The entrance and the holding-ground are good, and there is water sufficient for fair-sized steamers, but in north-easterly gales land-squalls are apt to descend from the hills. Drinking-water and a certain amount of produce can be obtained. On the shore are the villages of Katápola and Xylokeratídi, the former having a custom-house and telephonic communication with the capital. Port Kakopérato is formed by the convergence of Nikouriá Island with the north-west coast of

Amorgós, and offers good anchorage, except in south-west winds, in 18–20 fathoms between high shores. Giále bay, to the north-east of this, is more open, being $\frac{3}{4}$ mile deep and $\frac{1}{2}$ mile wide at its entrance, which is towards the south-west. The water is too deep for anchoring except at the head, where there is a sandy beach. It gives access to a fertile plain and is sheltered from the north and north-east. Lastly a temporary shelter from south-west winds is afforded by Grabóusa Isle in 10–13 fathoms 2 cables from the shore.

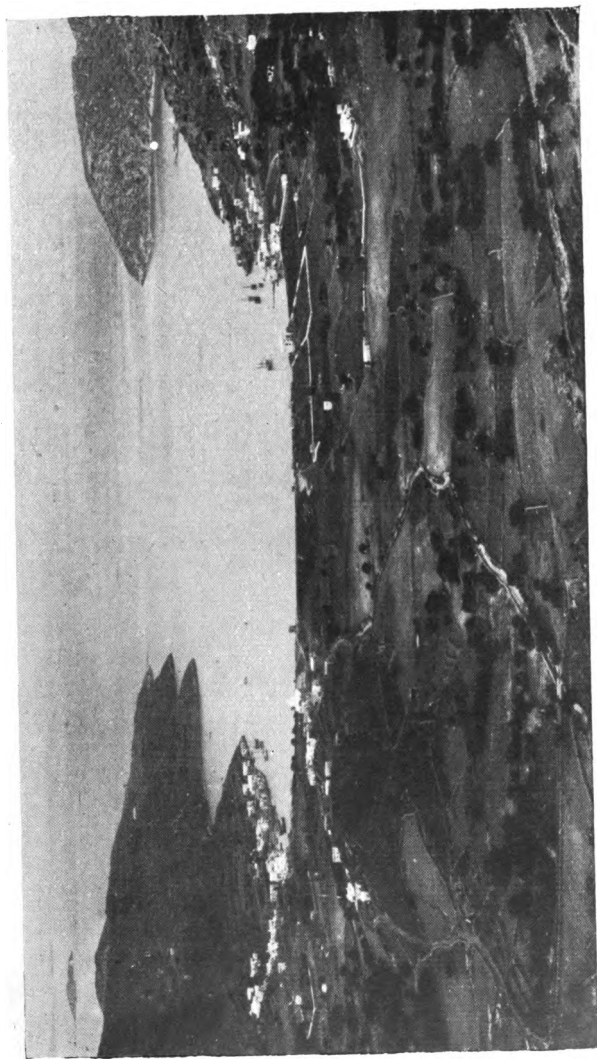
Communications

A weekly steamer belonging to a Greek island line calls at Port Vathý (Katápola) and also at Giále and connects Amorgós with Théra, most of the other south-eastern islands, and with Náxos, Páros, Syra, and Piræus. There are telegraphic cables to Théra and to Syra (via Náxos and Páros). Telephones connect the island with Náxos and Théra, and internally Giále and Katápola are connected with the capital. There are no roads, and the tracks—especially that leading from the capital along the mountain spine, up and down and across numerous ravines—are excessively rough and discourage traffic. Transport is by mules.

OTHER ISLETS AND ROCKS OF THIS SERIES

The Southern Diagonal Series is prolonged beyond Amorgós by a number of rocks and islets and terminates in the Lévítha group. About $4\frac{1}{2}$ miles due east of the north-eastern projection of Amorgós are the barren Liádi islets, one of which rises to 200 ft., while nearly 7 miles north-east of Amorgós begins the Lévítha group, a series of five islets stretching from west to east and being the summits of a submerged mountain-chain. The nearest (most westerly) is Kýnaros, which is about $2\frac{1}{2}$ miles long, rises to 1,067 ft., and has an indented outline. Used by the Romans as a penal settlement, it is now occupied by a few colonists from Amorgós (11 in 1896). Between this and Lévíthos are the uninhabited rocks, Gláros

PLATE III



AMORGÓS: PORT VATHÍ

(To face p. 148)

and the two Mávro isles. Lévíthos, the largest (about $7\frac{1}{2}$ sq. miles), rises to about 550 ft. and has numerous inlets. It is uninhabited and furnishes brushwood for burning to the great monastery of Pátmos, to which it belongs. The whole of this group, apparently owing to an oversight, seems still technically to belong to Turkey, but they are occupied by the Greeks, and their inhabitants were included in the official Greek census of 1896 as Greek subjects.

(F) SOUTHERN SERIES

(MÉLOS GROUP, THÉRA GROUP, ANÁPHE)

The series of islands which lie on the southern limit of the Cyclades consists of two groups (those of Mélos and Théra), Anáphe, and some unimportant islets. Each of the two groups in its turn consists of one larger island (Mélos and Théra respectively), one smaller (Kímolos and Therasía), and several more or less barren islets and rocks (Pólivos and Eremómelos; the Kaýméne, Asprónesi, &c.). But these islands have much in common besides this. Both Théra and Mélos are at least partly of volcanic origin, though volcanic agency is much more evident and more recent in Théra. Both have large internal basins where the sea has occupied an original crater, but the harbour of Mélos, with its gentler and more modified features, is more useful and is one of the best havens in the Aegean.

The geological composition of all these islands reveals their basic connexion with the Cyclades, Théra and Anáphe having a special connexion with Amorgós, but the Mélos and Théra groups are largely composed of an upper volcanic material, traces of which are also found in Anáphe.

Their climate, though milder and more equable than that of the northern Cyclades and the south-eastern mainland, is dry, and none of these islands is well off for water. In Théra the water-supply is a serious problem. Yet Théra is subject to mists, and the growth of cotton in these islands is perhaps to be explained by the heavy dews.

Such space as is available for cultivation—and in Théra this is nearly the whole island—is extremely productive and is generally utilized to the full. The products of cultivation are almost equalled in value by those of mining, and, while Théra is more noted for its wine, Mélos is better known for its minerals. Besides this there is considerable maritime activity, encouraged in Théra by the value of the island exports and in Mélos by the excellent harbour accommodation. As a whole this series, which includes in Théra the most populous and prosperous and the best-known island of the Cyclades after Syra, will bear comparison with any other.

MÉLOS GROUP

(MÉLOS, KÍMOLOS, &C.)

(1) MÉLOS

Area: $62\frac{1}{2}$ square miles. (Average length (E.-W.): 11 miles. Average breadth: $5\frac{1}{2}$ miles.)

Population: in 1907, 5,573. (In 1896 it was 5,310.) Population per square mile: 89.

Products: corn, olive-oil, wine, cotton, wool, iron manganese, gypsum, millstones, salt.

Physical Features

Mélos, the largest island of this group, offers a striking contrast to the usual Cyclades type and is rather to be compared in respect of its physical and geological structure with Théra, from which in other ways it has marked differences. The island forms a rough oblong whose length is about double its breadth; the longer sides face north and south, the shorter east and west, but the whole of the eastern part has a slight tilt up to the north, and the south-eastern corner is rounded off. Though bitten into by numerous open bays and bights, the east, south, and west coasts form fairly straight lines. The north coast on the other hand has three massive promontories and opens slightly west of its centre to admit a large bay into the very heart of the island. The only parallel to this in the Cyclades is the great inner bay

of the Théra group, but in Mélos the volcanic agency, except in a geological sense, is now less obvious.

The great inner harbour of Mélos is unevenly oval, the longer axis running with the length of the island (i.e. east-west). Its opening, which is relatively narrow, is towards the north-west and flanked on the east by the largest and highest of the three promontories mentioned above, which has the appearance of an open upstanding lid. Its southern shore approaches to within $1\frac{1}{2}$ mile of the south coast of the island, which is thus nearly divided into two.

These two portions of the island are almost equal and opposite in shape and extent but differ widely in general character. The eastern section is much lower than the western. Along the east coast runs a flat raised area rising at the middle to over 900 ft., and the central promontory of the north coast is occupied by ground nearly as high. Otherwise the east part of the island is low, and at the east end of the harbour are fair-sized marshy plains. The coasts also are here mostly low, and there are sandy beaches between the rocky stretches. The western portion on the other hand is rough and hilly and has rocky closed coasts, with only two small alluvial plains having beaches, one at the centre of the west coast, another and larger forming the western shore of the inner bay. The south-west corner of the island is occupied by a volcanic mountain mass rising in Mt. Prophètes Elías to 2,538 ft., with numerous spurs and outliers and cut into by ravines.

Geology

The peculiar structure of Mélos is due to volcanic agency of prehistoric date. Upon a foundation of crystalline rock—mainly gneiss—have been laid great masses of volcanic and also sedimentary deposit. The original rocks appear only in two places and in small extent at the extreme south-east and south-west of the island. They are gneiss containing small quantities of amphibolite and schists similar to those of Syra and have talc and mica schists superimposed. Upon these rocks rests a covering of tufaceous rocks, appearing

especially in the south-west, south-east, and east, while in the north-east and central south are considerable areas of andesite and trachyte. The greater part of the north-eastern half of the island, however, consists of Pliocene and diluvial marine deposits, which occur also east of Mélos harbour and extend to the neighbouring islands to the north-east, and around the harbour are large alluvial areas.

Iron manganese and argentiferous barytes occur in various places. Alum and sulphur and other volcanic products abound, emissions of vapour take place, and hot springs (notably on the beach at the head of Mélos harbour, and at two places farther east) cover their surroundings with sulphur. One, named Loutró, is held to have medicinal properties.

Vegetation, Cultivation, and Industries

The western and more hilly parts have a good deal of scrub upon them, mainly arbutus, wild olive, and locust trees (carobs), and the gullies are often filled with these and with oleander thickets. On the heights mastic and other shrubs afford pasturage to sheep and goats, and harbour game. Near the villages cypresses grow.

Water is not plentiful; the marshes east of the harbour are malarious, and frequent plagues have visited the island. Much of the lower parts, once highly productive, has been abandoned, and agriculture is mainly confined to the eastern part of the island, which is very fertile.

Vines, olives, and orange groves occupy the valleys and warmer slopes. More cotton is grown in Mélos than in any other island of the Cyclades. In the stonier parts are fields of corn. Besides the sheep (of a small variety) and goats raised in the west, poultry is plentiful, and there is a good breed of donkeys.

Mélos has mineral resources of some value (see above). The quarries from which millstones are cut are at a place called Révma in the south-eastern corner of the island. They belong to the Government, and the stones are sold to buyers on the spot. The average output in normal times is

about 6,000 pieces (about 1,200 tons). To the Government belong also the gypsum mines with an output of 100–200 tons a year, the total revenue to the State from both these sources being about £2,000 yearly. Salt, a Government monopoly, is produced to the amount of about 200 tons a year, and china-clay, cimolite, iron ochre, and andesite (for building purposes) are also occasionally produced in small quantities. Mélos also possesses sulphur, silver-ore, and iron-manganese deposits. These are not at present worked, but the output of the last was formerly 12,000–14,000 tons yearly. Melian sulphur is impure and has been largely replaced by the Sicilian product as a preventive against vine disease.

The island has a considerable seafaring population, and Melian sailors have long had a reputation as seamen and pilots in these waters.

The island women spin and weave the cotton and woollen garments for their families.

Owing to the pre-eminence of the mining industry the agricultural products scarcely suffice to support the population, and the only exports are minerals. The output of these fluctuates greatly, and the export values have ranged between about £24,000 (1906) and £1,100 (1911). The iron-manganese ores went chiefly to Great Britain; the gypsum and sulphur to Greece and Turkey; the millstones to Crete, Egypt, and Trieste. The only imports are flour and manufactured and colonial (sugar, tea, coffee, &c.) goods, the latter in small quantities.

Population and Settlement

The unhealthiness of the lowlands in the east and south and the pooriness of the western parts have caused the population to crowd together in the north-east of the island. Numerous churches are reminiscent of the ravages of pestilence and the means taken to combat them.

A small mining population is settled around the mines, but otherwise the capital and three villages of the central northern promontory contain most of the inhabitants. The capital,

Pláka (pop., with Kástro and Plákes, 2,034, P.T.O., C.H., and head-quarters of gendarmerie for Mélos, Kímolos, Síkinos, Sípghnos, and Pholégandros), is built on the western side of a steep hill (alt. 600–700 ft.) in the central northern promontory. It has a poor appearance, but commands a fine view of the harbour and its entrance. Three-quarters of a mile to south-east on a ridge 450 ft. high is Trypeté (pop. 1,133) a more prosperous-looking settlement than the capital. North-north-east of Trypeté and 1 mile east of Pláka is Péra Triovásalo (pop. 1,540), while 3 miles south-east of the capital, and situated on the northern shore of Mélos harbour just where the rocky coast gives place to beach and low ground, lies Adámas (pop. 617, P.T.O., C.H.), the chief port, connected with the capital partly by road and partly by track.

Harbours

Mélos bay is one of the best harbours in the Cyclades. Its entrance is partly covered from the north-east by the small island of Arkadiaís, between which and Mélos is a clear and deep channel. With an opening about 1 mile wide towards the north-west, and sheltered by high land to the north, west, and south-west, the inner basin is 5 miles long (east–west), broadens to an average of 2 miles, and except towards the east and south-east has high and rocky shores and deep water sufficient to accommodate a fleet. Anchorage can be found in any convenient berth in 10–25 fathoms with mud bottom, and usually the farther out the better the holding-ground. In southerly winds squalls sometimes blow off the south shore, and in such weather sailing vessels can best put to sea from an anchorage not too close inshore. Provisions can be obtained in small quantities, but water is scarce. From Adámas there is connexion both by track and by telephone with the capital. The best landing-place is at this port, and consists of a well-built stone jetty about 40 yds. long, with water of sufficient depth for service cutters. The harbour of Mélos has been used by fleets at various times as a naval base, and in certain circumstances its strategic value may be considerable. As a commercial port

it has now little value, and beyond local trade it is used only by occasional weather-bound vessels.

Though serviceable enough in certain weathers, the other inlets of Mélos are not needed, and have no settlements upon them. At Cape Phourkovoúni, where is the principal iron-manganese mine (with a plant driven by a 30-h.p. engine), is a pier connected with the mine by a light railway. Water can be obtained from a reservoir, and there are probably appliances for shipping-repairs on a small scale.

Communications

A steamer of one of the Greek island lines calls once a week and connects outwards with Kímolos only, inwards with Sípunos, Séríphos, Syra, and Piræus. Telegraphic communication with the mainland may be either by the Sípunos-Páros-Syra line or by that of Sípunos-Séríphos-Kýthnos-Kéos. There is telephonic connexion with Kímolos and Sípunos, and Adámas is connected with the capital both by telegraph and telephone. The only metalled road leads from Adámas towards the capital. It is 18 ft. broad, and is good for $\frac{1}{2}$ mile, when it crosses a watercourse by a stone bridge and ascends a steep hill. Here it is unfit for wheeled traffic, and, though better on top of the hill, is liable to damage by rain-storms. The other villages and parts of the island are reached by tracks. Mules are available for transport.

(2) KÍMOLOS

Area : 16 square miles. (Length : 5 miles. Breadth : about $3\frac{1}{2}$ miles.)

Population : in 1907, 2,015. (In 1896 it was 1,655.) Population per square mile : 126.

Products : cereals, wine, olive-oil, figs.

Physical Features, Geology, &c.

Kímolos, the only other member of the Mélos group which is of any importance, lies close to Mélos on the north-east, and is separated from it by a strait only $\frac{1}{2}$ mile wide. This strait is so shallow owing to sandbanks that the only passage with

a depth of 7 fathoms is but 200 yds. wide, and the neighbouring waters are set with numerous islets and rocks.

The island is compact and roughly circular, but is broken into promontories and a fair-sized open bay on the north-east, and there are also more or less exposed bays on the south-east and south-west. The three main heights are towards the north and form a chain running north to south (Mts. Palaiókastro (north), alt. 1,305 ft. ; Sklávos (middle), alt. 1,066 ft. ; Hágios Elías (south), alt. 574 ft.), but with their side-spurs they form an almost circular mass which falls steeply on the north coast, but has gentler slopes and one or two small valleys on all the other sides.

The geological composition of these hills is similar to that of Mélos, the greater part of the island consisting of volcanic rock—tufa with small appearances (especially in the north-east) of andesite. The underlying gneiss of Mélos does not come to the surface, but its sedimentary rocks appear and form a broad strip along the east coast of Kímolos, while above the bay on the south-west is a narrow alluvial plain. There are said to be hot springs towards the north, and silver-lead, iron-manganese, and zinc ores, besides cimolite, are said to occur. The rocks of Kímolos present the most astonishing and beautiful series of colours, but they do not produce fertile soil.

The climate is mild and warm, but the island has frequently been visited by pestilence, partly owing to the lack of a good water-supply. The almost complete absence of springs and wells makes cultivation difficult, and the inhabitants rely on rain-water collected in cisterns. When this fails water has to be imported from Mélos.

Cultivation, Industries, and Population

The hills are quite barren: the original olive groves were destroyed by the Venetians, and only the southern half of the island can show scanty fields of grain, bordered with loosely built stone walls, and a few olives, figs, and vines in the small valleys. The most important of these valleys is Dékas. Corn

(wheat and barley), wine, pulse, and cotton are raised in quantities sufficient for home consumption, and there are a fair number of sheep, goats, oxen, and asses. The women weave the cotton into garments.

- There is considerable maritime activity, and the island possesses about 20 sailing vessels (10-75 tons). The sailors of Kímolos have been known and employed as pilots since the eighteenth century. Sponge-fishing has been carried on occasionally round the coast.

In ancient times silver was mined, and the island was famous for its ' Kimolian earth ' (fuller's earth : cimolite or saponite). Mining is not now carried on, but small quantities of a soft building-stone are quarried and exported to other parts of Greece.

Practically the whole population lives in the capital, Kímolos (pop. 2,000, P.T.O., C.H.), which stands on a hill in the south-east of the island, 10 min. from the small harbour. It is built on the quadrangle principle, all the houses facing inward, the only exits being by public gates. The streets are incredibly filthy.

Harbours and Communications

There are several small bays and anchorages, but no good accommodation for large vessels. The harbour of the capital, called Hágios Geórgios, looks south-east towards Pólivos, and is partly sheltered by off-lying rocks, but it is quite small, and has only 3 fathoms. The bay of Hágios Ménas on the east coast has an opening to the south-east about 130 yds. wide and opens inside to 300 yds. The depth at the entrance is $3\frac{1}{2}$ fathoms, and inside is a maximum of 6 fathoms, shallower towards the east. This bay affords good shelter to sailing craft in south-west gales, and there is a pier 105 ft. long and 4 ft. wide. The other bays and coves are unimportant.

A steamer of one of the Greek island lines calls weekly and connects with Mélos, Sípunos, Sérifhos, Syra, and Piraeus. There is telephonic communication (only) with Mélos, the

telegraph being out of order. The island tracks are rough; asses and mules effect transport. Each family has its own beast, but the asses are small.

(3) PÓLIVOS (POLÝAIGOS) AND EREMÓMELOS (ANTÍMELOS)

The two remaining islands of this group are small, barren, and uninhabited, except by a few herdsmen.

Pólivos (about $9\frac{1}{2}$ sq. miles) is an egg-shaped island south-east of Kímolos, from which it is separated by a clear and deep strait about a mile wide. Its coast is ragged, especially towards the north-east, and the hills which occupy it rise to 1,170 ft. Called Isola Brusiata ('Burnt Isle') on account of its barrenness, it belongs to the people of Kímolos, who use it for cattle-rearing.

Eremómelos is a small but lofty triangular rock 5 miles north-west of Mélos. Its sides, which are fairly equal and straight, are about 2 miles long. The island consists of a single mountain 2,250 ft. high, which can be seen from a great distance standing out of the sea. It serves as a pasturage for goats, and is said to have wild goats upon it besides some large ancient cisterns.

THÉRA GROUP

(THÉRA (SANTORÍNE), THERASÍA, ASPRÓNESI, THE KAÏMÉNE, AND OTHER ISLETS)

The Théra group, consisting of one fair-sized and one smaller island, together with some islets and rocks, is one of the most remarkable natural features of Europe. The regularity of its oval outline, the prevailing slope from an outer coast of black sand up to an inner concentric ridge or rim, no less than its striking geological structure, stamp it unmistakably as a volcano.

Starting from a point in or near a more ancient island, volcanic activity seems to have built up a cone whose original height is estimated at about 2,000 ft. and whose circumference was roughly 30 miles. This volcanic cone is, geo-

logically speaking, of comparatively recent date, nor are its activities entirely extinct. At some later periods—probably about 2,000 B.C. by volcanic explosion and in 237 B.C. by an earthquake—the sides of the cone were breached in three places (at the north-west, west, and south-west), and through the gaps the sea rushed in and occupied the crater, forming a deep oval basin, landlocked except in the directions mentioned above.

Thus, in place of the original volcanic cone, whose greatest length (north-west to south-east) was approximately $10\frac{3}{4}$ miles and breadth (south-west to north-east) $7\frac{1}{2}$ miles, there are now : (1) the island of Théra on the north, east, and south, crescent-shaped and concave towards the west, occupying about two-thirds of the original circumference ; (2) the island of Therasia on the north-west, a 3-mile-long remnant of the volcanic rim, separated from the north-west corner of Théra by a passage $1\frac{1}{2}$ mile wide ; (3) the rock Asprónesi, an unsubmerged fragment lying midway between Therasia (on the north) and the south-western point of Théra (on the south), with channels of about $1\frac{1}{2}$ mile width on either side of it.

These land-portions, which still preserve the original ring fairly intact, surround an oval basin, approximately $6\frac{1}{2}$ miles long (north-south) and $4\frac{1}{2}$ miles broad (east-west), with an average depth of 200 fathoms. The sides of this basin, both above and below water, are extraordinarily steep and precipitous, but in the middle three islets, the Kaÿméne (' Burnt ') Isles, one larger, two quite small, have emerged through volcanic action, and form a still-active volcanic centre to the group, lying close together, and rather south of the middle of the great inner basin.

Special circumstances have thus formed these islands into a group much more closely related than most of the Cyclades groups, and, though treatment of them in detail will be necessary, from some points of view they can hardly be considered apart.

(1) THÉRA (SANTORÍNE)

Area : $27\frac{1}{2}$ square miles. (Maximum length (NW.-SE) : $10\frac{1}{2}$ miles. Maximum breadth : $3\frac{1}{2}$ miles.)

Population : in 1907, 12,109. (In 1896 it was 13,617.) Population per square mile : 440.

Products : wine, tomatoes, beans, *pozzolana*.

Physical Features

The island of Théra, commonly known as Santoríne (i.e. St. Eiréne), forms a crescent convex towards the east, and with long and clearly marked horns pointing west at both its north and south ends. The slenderness and regularity of this crescent are obscured only by the oblong mass which thickens and broadens it towards the east and south-east, and contains the crystalline ridge of which the original island was composed. Neglecting for the moment this ridge as a now subsidiary feature, the island may be described as a hollow truncated cone, which, from an outer sandy beach of unusually regular ovaline curvature, rises at first gently (3° - 4° slope), and afterwards more steeply (10°), to an inner concentric rim which, though unbroken by large gaps, undulates between elevations of 1,200 ft. and 500 ft. On its inner or concave side this rim, which is quite narrow, falls precipitously to the great basin occupying the former crater, the cliffs here presenting unique features. From heights averaging well over 700 ft. they plunge, sometimes sheer, sometimes in a series of gigantic steps (formed by successive volcanic deposits), beneath the sea, leaving at their base one or two insignificant platforms and, except along the southern horn or peninsula (Akrotéri), which has sand beaches both inside and out, hardly a single cleft or beach. From top to bottom the lateral interval is rarely more than 100 yds., and here and there earthquakes and weathering combined have formed rifts (later filled with white pumice) and immense outstanding bastions. The uncanny effect of these great encircling cliffs is heightened by the great and sudden depth of the waters at their base, by the hot springs which

well up here and there below them, and by the still smoking peak of the central Kaÿméne Isles. The varied forms and bizarre colouring of the cliffs—in which all shades and colours, red, grey, blue, yellow, green, as well as white and black, are represented in the strata—only partly relieve the sense of oppression, and the landslides and great boulders ever threatening to break loose from above complete a scene hard to imagine or describe.

Though this inner coast is by no means regular, there are, for the reasons above described, no bays of importance to sailors, and the anchorages are either artificial or are found under the lee of the Kaÿméne Isles. Similarly the outer sandy coast offers no facilities for the approach of modern vessels, and the island cannot be said to afford good shipping accommodation.

The outer surface of the cone, with its graduated slopes, is on the whole regular, and scored by numerous narrow and steep-sided ravines cut by erosion through the pumice covering. At two places only the uniformity of this outer front is broken. Towards the south-east lies the rocky mass which represents the original pre-volcanic island. Running as a ridge obliquely (north-west to south-east) across the main crescent slightly south of its extreme eastern curve, this mass, which has been partly overwhelmed by volcanic deposits, rises in Mt. Prophétes Elías to 1,887 ft. Continued towards the south-east by a saddle (Selláda), it terminates at the south-east in the height known as Mesavounó or Hágios Stéphanos (alt. 1,200 ft.), whose high and steep sides, projecting into the sea, form the only considerable rocky stretch of the whole outer coast. These crags can be distinguished far out at sea.

On either side of this ridge along the coast are the two only plains of Théra, largely covered with fertile soil washed down from the neighbouring heights. In the more northerly of these, near the coast, stands an isolated rock (Monólithos). Into the southern plain two small brooks find their way from the slopes of Mt. Prophétes Elías. These are the only streams possessed by the island. The narrow ravines referred to above are dry,

except after rain. Then they are filled with roaring torrents, which endanger the paths and houses alongside them, and carry down much mud towards the coast ; but few of them reach the sea.

The scarcity of water is one of the most striking features and serious problems of Théra. On the slopes of the oblique ridge (Selláda, &c.) are a few springs, not always running ; the outer sand beaches have below them brackish water, which can be reached only by wells 9–13 ft. deep, and windmills are sometimes employed. Not reckoning the mineral springs which are found at various places on or near the coast, the above are the only sources of ground supply.

Geology

The ridge formed by Mt. Prophétes Elías and its companion heights belong to the crystalline Cyclades formations, and, more particularly, is closely related to the rock system of Amorgós. Below are argillaceous schists, sometimes rather crystalline, and containing layers of greywacke, conglomerate, limestone rubble, and semi-crystalline limestone. Veins of quartz and calc-spar occur, and near Thermiá is a deposit of lead glance and pyrites. On top of these is a great mass of bright bluish-grey limestone, more or less transformed into an inferior marble, which is usually found quite exposed.

These crystalline rocks are confined to the south-east ; to the north-west and west all is of volcanic origin, and the lava and pumice waves have swept up and overlaid Mt. Prophétes Elías high up on its north-western flanks. The hardness, clearness, and good preservation of the volcanic features (especially as evidenced in the cliffs of the inner basin) betray the geological recentness of their formation. The deposits belong mostly to the andesite group, and take the usual form of alternations of hard lava out-pourings and softer tufa layers composed of slag and ashes. This is clearly seen in the step-like formations of some cliffs of the inner basin. The outer coasts are mostly formed by long stretches of fine black volcanic sand, and in or near these (e.g. near Cape Kólymvos

to the north-east), as also in several other places (e.g. south of Mt. Gávrilos, and near Pláka and Thermiá on the inner coast), are hot springs, the last-mentioned being 91° F. and 95° F. respectively, and containing sulphur and alkaline salts.

Most distinctive, however, is the immense (100 ft. thick) mass of pumice-stone which has been poured out on top of all the other deposits, filling the rifts in the lower lava, streaming in places down the sides of the inner cliffs, surging high up the north-western flank of the limestone ridge, and forming the greater part of the covering of the island. Blinding white in colour it forms a striking and unique sight, and on the outer slopes it has been cut through by the numerous watercourses mentioned above, which, however, though narrow and steep-sided, go no deeper than the underlying lava. On top this pumice has been decomposed into small loose fragments, which, by harbouring moisture between them, to some extent counteract the porous character of this stone. The low plains north and south of the limestone ridge are largely covered with volcanic débris.

Climate

The climate in most respects resembles that of the southern Cyclades, and is milder in winter and cooler in summer than the mainland. The winds in winter are sometimes bitterly cold and carry sleet, and in the summer they stir up the dust and grit. The rainfall is scanty, and the island is apt to suffer from drought. The thirsty and porous volcanic soil does not retain water, and springs are rare. The rain is caught in rock-hewn cisterns, sometimes 30–40 yds. in circumference, and this water has to serve for agricultural and domestic as well as for drinking purposes. When this supply fails water has to be imported from neighbouring islands. The atmosphere on the other hand is moist. Mists and heavy summer dews occur, and the houses are very damp. Despite this the climate is healthy, and epidemics are rare.

Cultivation and Industries

Théra as a whole is not infertile, though the conditions which go to produce that result are curiously complex. The limestone region of the south-east forms a distinct cultural area and is the most infertile, the bare hills offering but scanty pasture to a few small animals, while on the terraced slopes are grain and pulse-fields and a few fig-trees.

In the remainder of the island the advantage of volcanic composition is counterbalanced by the recentness of the formations and the consequent paucity of soil. On the other hand the two plains referred to are rich and productive, while the porous surface of the greater part of the island, owing to its crumbly decomposition, retains moisture available for the roots of vines. The most serious drawback is the scarcity of water, and the productivity of the island, in spite of this, speaks well for the patience and ingenuity of the inhabitants.

The volcanic rock is unsuited to the growth of trees, and such as exist are stunted. The absence of wood, next to that of water, presents the most serious difficulties. Around the villages a certain number of palms, cypresses, olives, and stunted fig-trees grow, besides aloes and 'prickly pear' cacti, and in the watercourses of the ravines are osier willows.

On the two alluvial plains of the south-east considerable quantities of tomatoes, onions, beans, barley, water-melons, and pumpkins are grown. The tomatoes are mainly preserved or converted into paste for export. The cultivation of cotton, once considerable, has been largely superseded by that of the vine, the reason given being that frosts destroyed the cotton plants, but more probably vines were found to be more profitable. Such cotton as is now grown is used at home.

By far the most important occupation is viticulture. Several varieties of grapes are grown, partly for table use but mostly for wine. Vineyards cover nearly the whole of the pumice surface, which has been broken up by weathering and cultivation into a rubble, and contains sufficient moisture even in hot and dry seasons to keep the vines fresh. The picture

presented by this vine area, when viewed above from the inner rim of the crater, is remarkable. The uniformly dead-white pumice, stretching in broad expanses down the outer slopes, is dotted with innumerable bright-green vines. The vineyards are separated by long winding walls of black shining obsidian or red volcanic rock, which mark out the roads. These roads are usually deep in white dust, which is swept up by the winds. The stream-courses, deep and narrow, hardly appear until one is close upon them, and the villages contained in them are usually quite invisible or indicated only by an outstanding church-top or by trees. The vines are planted far apart, kept low, and trained to form large hollow globes. Between them barley is grown, and is pulled up by the roots to economize the straw. The vine provides the Theran with drink, firewood, food for his asses (young trimmings) and poultry (buds from prunings), while the export of wine employs a fleet of vessels and brings much wealth to the island. The wine is either white or red and keeps well. A muscatel wine, resembling Madeira, is also made.

There are about 2,000 sheep and goats on the island, and 1,200 mules and donkeys. In the autumn immense flocks of quail and other birds settle on Théra on their way south. They are trapped and shot and preserved for food.

Mineral products are volcanic cement (*pozzolana*) and powdered pumice-stone. The former, though not of first-class quality, is largely exported, and is also used to construct the walls and domed roofs of Theran houses, for which purpose it is well adapted. The women of Théra spin the home-grown cotton into articles for family use, and from the osiers growing in the ravines baskets are woven.

Trade and Shipping

The trade of Théra shows a steady increase, and in 1914 amounted to nearly £71,000. Of this £52,000 were exports and about £19,000 imports. The chief exports were: wine (about 1,000,000 gall.), the value of which, with by-products (cognac, must, grape-pips, &c.), was about £30,000; tomato

paste, £9,000 ; pulse, £4,000 ; volcanic cement and powdered pumice-stone (about 25,000 tons), £6,000–£8,000. The wine goes chiefly to Russia (Black Sea ports), the East (Egypt, India), the Balkans, Greece, and Great Britain, and the other products mainly to Turkey, Greece, Egypt, and the United Kingdom. The chief imports are flour and foodstuffs (dried fish, rice, &c.), coal, wood, manufactured goods, and colonial products, and these come mostly from the United Kingdom, Russia, and Greece.

The trade is borne in about 400 vessels annually calling at the harbour of the capital. Of these about 350 are Greek sailing vessels, 30 Greek island steamers, and the remainder mainly Austro-Hungarian and Italian sailing vessels.

Inhabitants, Population, and Settlement

The people are hospitable, industrious, sharp-witted, and intensely patriotic, but defectives are numerous (owing perhaps to in-breeding). Many of the best families are of Venetian and Spanish origin, as their names show, but only Greek is spoken. These families are mostly Roman Catholic and reside in the capital, where they form a rich and educated social element, living on the best of terms with their Orthodox fellow-islanders. They number about 600, and support a bishop and an enlightened clergy, whose educational institutions are well known.

The settlements and dwellings of Théra are in keeping with its other unusual features. To economize ground valuable for cultivation the town and many villages occupy peculiar sites. The capital is built in a long line along the narrow rim of the crater and partly down the face of the cliff towards the harbour. The villages are often squeezed into the narrow ravines, where the houses cling to the steep sides or are excavated out of them, occupying quaint positions. The above-ground houses of Théra are single-storied, strongly built, and clean. They are often vaulted over, and cement is largely used in their construction : this is due both to the scarcity of wood and the prevalence of earthquakes. Cave-dwellings, another result of lack of timber,

are often mere hollows excavated in the soft tufa and faced with a wall having doors and windows. These dwellings are most common in the villages, but can also be seen on the ascent from the harbour to the capital. Chapels are numerous and often picturesque.

The island of Théra is after Syra, the most densely populated in the Cyclades. **Pherá** (Théra), the capital (pop. 1,040, P.T.O., C.H.; residence of a Greek Orthodox and a Roman Catholic bishop; head-quarters of gendarmerie for Théra, Therasía, Anáphe, Íos, Amorgós), is situated on the crater-rim (alt. here 950 ft.), at about the middle of the western coast. At sea-level directly below it is a small natural platform, which offers a landing-place (*skála*), and which is occupied by some houses and a chapel. A steep winding road leads up to the town. This stretches along the crater-rim, which its one street follows unevenly and sometimes with steps. Flights of steps connect side settlements on either hand with this main street, and the town with its compact houses, fine chapels, and magnificent view is perhaps the most striking in the Cyclades. There are three Roman Catholic monasteries with 109 monks in all, besides boys' and girls' schools, which rank with those of Syra, Ténos, and Náxos. A large knitting factory, worked by steam, employs some 100 women, and the trade in the harbour is considerable. There is a British Consular Agent, and the National Bank of Greece has a branch here.

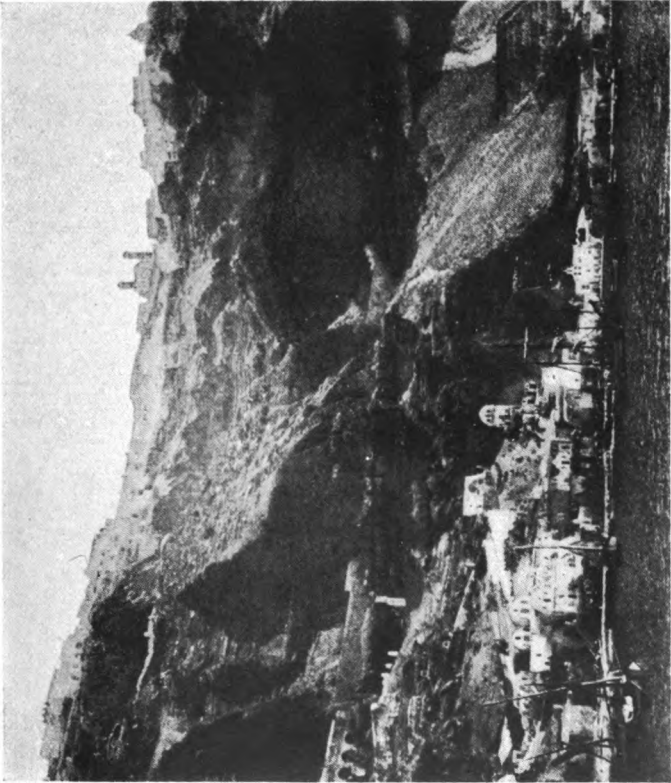
The population is by no means concentrated in the capital. The two fertile plains of the south-east have flourishing villages ranged on the heights around them. Overlooking the more northerly is Goniá (pop. 913), slightly north-west of which lie Vothó (pop. 403), composed mostly of rock-dwellings cut in the sides of a ravine, and Messariá (pop. 1,238, P.T.O.), while on the north-western slopes of Mt. Prophétes Elías and close to Goniá is Pýrgos (pop. 965, P.T.O.), a dirty old-world fortress town. Above the southern plain is the prosperous village of Emporió (pop. 1,087), while in the extreme south-western horn of the island is Akrotéri (pop. 303, P.T.O.). The peninsula of Akrotéri is composed of blood-red

rock and contains a deep volcanic gorge, above which stands the old Venetian town and fortress surrounded by great caves. The ancient capital was situated on the Mesavounó promontory high above the sea, and here excavations of great interest to archaeologists have been made. On the road from the capital to Pýrgos and about $1\frac{1}{2}$ mile from the former is Karterádos (pop. 749), while on the crater-rim, overlooking the inner basin about $4\frac{1}{2}$ miles south of Pherá, is Megalochóri (pop. 782, P.T.O.), also of Venetian origin. All these villages lie in the southern half of the island. The northern is equally well populated and contains : Kontochóri (pop. 925) ; Pherostepháni (pop. 511) ; Hemerovígli (pop. 658), an old Venetian settlement on the cliffs north of the capital and linked with it by houses ; Voúrvoulo (pop. 343) ; while the north-western horn of the island is occupied by Apáno Meriá (Oía ; pop. 1,493, P.T.O., C.H.), a flourishing place largely built and decorated with the prevailing red stone, where steamers call once a week. To the east of this are several smaller villages, together containing 600 inhabitants. Thus the population is fairly well distributed over the island, a fact significant of its uniform productivity.

Harbours

In spite of its appearance Théra offers little good accommodation for ships. The extreme abruptness of its cliffs on the inner side and the sloping sands of its outer coast are the main cause of this. Moreover the largest entrance into the inner basin faces south-west (i. e. towards the prevailing winter gales), and volcanic activity is still apt to cause alterations of depth, notably near the Kaýméne Isles. The inner basin is girt by steep and closed cliffs which plunge almost vertically below the sea. The *skála* or landing-place of the capital is formed by a small natural platform at the foot of the cliffs. It is large enough to contain some houses and is connected with the capital above by a steep winding track. There is no anchorage owing to the depth, and merchant vessels make fast to bollards cut in the cliff, while a buoy about 100 yds. out serves for mooring

PLATE IV



THÉRA : LANDING-PLACE

(To face p. 168)

small vessels. Closer in a small breakwater covers water of 1–2 fathoms sufficient to accommodate about 20 boats, and on this breakwater are two small cranes.

• The usual harbour, however, is in the narrow water between Néa and Mikrá Kaÿméne, $1\frac{1}{2}$ –2 miles south-east of the *skála* referred to. This channel, called Port Megálo, is 70–80 yds. wide (at narrowest), 7–15 fathoms deep, and about one-third mile long, and is formed by the juxtaposition of the two islands. Open towards north-north-west, its lower end is nearly closed. Twenty fair-sized vessels can lie here, secured to bollards on the shore, and near by are the well-known hot sulphur springs (125° F.). These springs discolour the water and will scour the copper bottoms of vessels in a few days.

East of Mikrá Kaÿméne also anchorage can be found in $5\frac{1}{2}$ fathoms on a bank, but the space available is limited. Other inlets around these central isles are used, and in fine weather near Asprónesi (600 yds. south-west) is an anchorage in 9–10 fathoms. All these (except the last) are sheltered from the north-east summer gales, but only Megálo and one or two smaller inlets of the Kaÿméne Isles are quite safe from the south-east, and all anchorages near the Kaÿméne Isles are liable to alterations of depth through volcanic activity.

Along the south coast are several bays in which shelter may be found in convenient depths from north-east winds, but they are open to the south and south-west, while at Epáno Meriá (Oía) is a landing-place with a small quay and a crane but no anchorage.

Communications

Théra is the terminus for most of the Greek island steamers serving the southern Cyclades. Five boats a week call at the capital and make connexion with all the important neighbouring islands (except Mélos) and with Syra and the mainland via Náxos and Páros. Once a week a boat calls at Epáno Meriá (Oía), and this goes also to Anáphe.

Théra has telegraphic communication with Syra through Íos and Páros or else by Amorgós–Náxos–Páros. There is

telephonic communication with Amorgós, Anáphe, and Therasía, and perhaps with Íos, and internally with Megalochóri, Messariá, Pýrgos, and Emporió.

There is one road of about 4 miles, from the capital to Pýrgos. It is level and straight, but deep in soft dust, and on its way passes through the villages of Karterádos, Messariá, and Vothó. The path which leads up the cliff from the *skála* to Phéra is broad, winding, and steep. It is well built and crosses numerous ravines and landslips by means of arches and is built at places into steps, which are of obsidian and extremely slippery. It is quite impossible for wheeled traffic, transport being by means of donkeys. The road as well as the *skála* and dwellings beneath are always in danger from landslides and huge stones crashing down from above. For the rest, tracks connect the villages : travelling over these is not difficult, and mules and asses are plentiful.

(2) THERASÍA

Area : 2½ square miles. (Length : 3 miles. Breadth : 1 mile.)

Population : in 1907, 679. (In 1896 it was 855.) Population per square mile : 247.

Products : cotton, wine.

Therasía, the most north-westerly member of its group, is a short curving segment of the original volcanic cone severed from the main body in 237 B. C. It is separated from Théra on the north-east by a channel (1-1½ mile wide) bordered on both sides by shoal waters but 195 fathoms deep in the middle. It closely resembles Théra, but everything is on a smaller scale. Its inner (east) coast rises in cliffs over 900 ft. high, but on the west the land slopes evenly down to the coast, and is furrowed by narrow ravines.

Vines and cotton are grown, but grain occupies relatively more space than in Théra, and more goats and mules are raised. The best pumice (*pozzolana*) mines, besides a Government salt-works, are on Therasía, but most of the island belongs to wealthy owners resident in Théra, and this has a depressing effect on industry.

There are three villages : Manolás, the largest (pop. 374, C.H.), situated near the top of the eastern cliffs; Potamós (pop. 160) and Agriliá (pop. 145) farther south and at a lower elevation.

Therasía has telephonic communication with Théra.

(3) ASPRÓNESI, THE KAÏMÉNE AND OTHER ISLETS

Asprónesi, the only other relic of the original volcanic ring, lies about midway between Therasía and Akrotéri promontory (at the south-west of Théra). It is no more than a rock (about 800 yds. long and 300 ft. high) and was once part of the actual crater-rim. The water on its inner (north-eastern) side is deep, but on either side are shallower belts (7-9 fathoms).

The KaÏméne ('Burnt') Isles are products of quite recent volcanic origin. About 200 B.C. Palaiá KaÏméne made its appearance, and was increased by successive eruptions until A.D. 1427. Over a century later (A.D. 1573) Mikrá KaÏméne was formed some distance to the north-east, while in the first decade of the eighteenth century Néa KaÏméne was thrown up between the two former. Further activities, stretching from A.D. 1866 to 1870, formed a new cone (325 ft. high), named after King George of Greece, which finally coalesced with Néa KaÏméne. There are still signs of volcanic activity (hot springs, sulphurous fumes, &c.) on this island, which is a steep black cone of cinders and obsidian rising to the height of 438 ft.

Three other islets belonging to this group lie about 11 miles south-west of Théra. They form a curving line from north-west to south-east: the most northerly and largest is Christiané (915 ft. high), in the middle lies Askáne (534 ft.), and Escháte is the smallest and most southerly. They are composed of volcanic rocks and are quite barren, and the same applies to the islet of Ánhydros or Amorgópoulo, which lies almost equidistant from Théra, Anáphe, and Amorgós.

ANÁPHE

Area : 14 square miles. (Length : 7 miles. Maximum breadth : 4 miles.)
Population : in 1907, 579. (In 1896 it was 643.) Population per square mile : 43.

Products : wine, vegetables, fruits, corn for home consumption only.

Physical Features

Situated about $12\frac{1}{2}$ miles east of Théra, Anáphe, the most south-easterly island of the Cyclades, is in form roughly triangular with apexes directed north, west, and east respectively. To the last-named apex is attached, by a narrow neck, a long thin peninsula running east, slightly concave towards the north and occupied by a single bare marble ridge, 1,476 ft. high.

The island itself is occupied in its north-eastern part by a broad flattened ridge running east-west, rising at its north-western corner to Mt. Vigla (alt. 1,916 ft.), and to this corner is attached another minor hill-mass (Mt. Theológou) which fills the northern angle of the island. On the north-east the mountains lie steeply above the coast, there being room for only two small valleys, but on the other sides the slopes are gentler and admit numerous glens, while the south-western angle is formed by a low irregular hill-land, also cut by valleys.

In spite of this prevailing gentleness of feature, the coasts are everywhere rocky, exposed, and in places cliff-bound. There is hardly an inlet of any size, fierce land-gusts (in northerly gales) make the south coast unsafe, and Anáphe in these respects is to be compared with Síkinos.

The rainfall is scanty, but the climate is moist, warm, and extremely healthy. Water abounds in the glens, though windmills have to be used at higher levels.

Geology

The geological composition of Anáphe is remarkably complex. The eastern peninsula is entirely of marble, but in the main part of the island (except the west) there is a confused alternation of amphibolite (prevailing hornblende gneiss), serpentine, and limestone, as well as other rocks. The lime-

stone, sometimes appearing as marble, usually forms the upper layers and the heights, and in small areas of the south-east hornblende granite, volcanic diorites, and dolomite (above the capital) occur.

Layers containing lead glance, calamine, and haematite are also found in the gneiss area, as well as seams of quartzite exhibiting haematite.

Along the west coast is a broad stretch of sedimentary rocks (grey sandstone, conglomerates, and argillaceous schists), which bear some resemblance to those of Théra and Amorgós, and are perhaps related to similar deposits in Náxos (near Mélanes) and the Makariaís Isles (see above, p. 140), while even in the gneiss area argillaceous schists, greywacke, and argillaceous mica schists are found inserted.

Thus, while the hornblende gneisses connect Anáphe with the main Cyclades group, it shows relations also with Amorgós and the islands on the Asiatic side, as well as signs of volcanic influence in its diorite and dolomite.

Cultivation and Industries

The mildness of its climate, but to a much greater extent the variety and confusion of its geological structure, make Anáphe not infertile. To the latter cause is due also, no doubt, the prevalence of springs in its valleys. The highlands are indeed bare save for phrygana scrub and support only goats, but in the glens on all sides there are gardens and orchards growing many sorts of fruits, though olives are not plentiful. The slopes are terraced and bear corn, and the hill-country of the west is covered with vines. Wine, wheat, honey, and wax are the chief products. Few cattle are reared, and even asses are scarce. Cotton, which was produced in the Middle Ages, is not now grown, and the produce of the island suffices only for the inhabitants, whose fare is chiefly vegetarian, though the partridges and doves which abound are used as food. Owing to its isolation and the simplicity of its life the island is self-supporting to an unusual degree, and there are few exports.

Inhabitants, Population, and Settlement

The people are neither energetic nor enterprising, and live to a great age. Their isolation (due to the nature of their coasts) and perhaps also the conditions of land-tenure (cf. Íos, p. 136) discourage great activity, and the island is not as closely populated nor as productive as perhaps it might be. The coasts are inhospitable, and seafaring does not exist, but a great many of the islanders, men and women, seek work abroad, the men as labourers (in Athens) or as merchants (Egypt). Contrary to the usual custom these emigrants seldom return to their home.

The population is mostly concentrated in the capital, only a few cultivators living in huts on their allotments. Anáphe, the capital (pop. 579, P.T.O., C.H.), is a relatively poor and insignificant village situated on a conical hill forming one of the southern spurs of the main (Vígla) ridge. It commands a fine view and is conveniently situated as regards the productive valleys and hill-country of the south and south-west, and lies on a site similar to that of the ancient capital, which is farther east. Its houses are vaulted, whitewashed, and consist usually of only one room. The town is clean, and the people are cheerful, cleanly, and hospitable.

Harbours and Communications

The island is destitute of harbours. There are several open bays, but they are all exposed to the prevailing winds and offer no good anchorages. The capital is connected by a track with a small bay about 1 mile below and south-east of it. This bay is partly sheltered from the south-west by a high cliff and a small island, but the accommodation is very limited, and in northerly gales dangerous land-squalls strike down the coast.

A boat of one of the Greek island steamship lines comes to Anáphe, weather permitting, once a week and makes connexion through Thérà with the other islands and with Syra and Piræus, but the island is often isolated for weeks together by gales.

A telephone line connects Anáphe with Théra. Travelling inland has to be done either on foot or upon bare-backed asses.

ISLETS AND ROCKS

South of Anáphe are several small uninhabited islets : these are Tá Phtiná, a small double isle ; Pachiá and Makriá farther south, of which Pachiá is said to be of marble.

SECTION II. NORTHERN SPORADES

GENERAL SURVEY

Physical features—Geology—Flora and fauna—Climate—History—Racial and social characteristics—Agriculture, mining, shipbuilding, and other industries—Trade and shipping—Harbours and communications—Administration, areas, and population—Money—Weights and measures—Calendar.

PHYSICAL FEATURES

THIS group, whose total area is variously estimated at 175–220 sq. miles, contains one medium-sized island (Skýros : 79 sq. miles), 5 small islands (Skópelos : 47 ; Chelidrómia, 30 ; Skíathos, 23 ; Kýra Panagiá, 9 ; Gióúra, 6 sq. miles—all approximately), besides a great many islets and rocks.

Skýros lies about 22 miles north-east of the central part of Euboea, and about 32 miles from the main line of the Magnesian group to the north-west. The latter form one clear series (with perhaps the traces of a second parallel row in Pipéri and Skántzoura), an obvious extension of the narrow mountain-ridge of the Magnesian peninsula (eastern Thessaly) and the relics of an almost equally clear link between it and the peninsula of Chalcidice, which lies about 43 miles north of Psathóúra.

This narrow chain of islands stretches first (in Skíathos and Skópelos) about 25 miles east by south from the end of the Magnesian peninsula, and then about 34 miles north-eastwards, thus forming a curved or rather boomerang-like figure sweeping up and across the entrance of the gulf of Salonica. On its inner (western) side this chain is bound with both the Magnesian peninsula and with Euboea, but much more closely with the former, and Skíathos stands directly in front of the mouth of the Trikeri channel (the entrance of the gulf of Vólo), while between Skópelos and Chelidrómia is the normal route from Salonica to Piræus.

It is this position of the Magnesian Islands, off the harbourless north-east coasts of Euboea and Thessaly and athwart

the main north-western trade-routes from the central and south-eastern parts of the mainland, together with their possession of several fair harbours, which constitutes their importance to Greece.

On the east all these islands, including Skýros, look out on the central Aegean ; the nearest land on that side is the island of Hagiostráte, itself in the open sea, and over 43 miles distant from the Magnesian Islands, and Lémnos, farther to the north-east, 56 miles.

Around the larger islands are innumerable islets and rocks ; off the coasts are numerous reefs and shoals, and some of the channels (e. g. that between Skiáthos and the Magnesian peninsula) are beset with rocks and shallows. Navigation is therefore difficult and has usually to proceed by narrow but deep channels and along certain well-marked lines. Between the islands of the Magnesian group set strong currents, which appear to be tidal but are also strongly influenced by the winds. These latter are variable and fluctuate rapidly, and for small sailing craft especially the navigation of these islands is dangerous (see below, p. 189).

On their more exposed sides (to the north-east and north) these islands have usually coasts worn steep and straight by abrasion, with remains of their former irregularities in the shape of off-lying rocks and reefs. Their south-western coasts on the contrary have numerous ragged bays and indentations, some of them of considerable size (e. g. Kalamítza and Treís Boukkais bays in Skýros). As a general rule the coasts all round are high and rocky.

The islands are mostly occupied by limestone mountain masses attaining considerable heights, the two highest being Mt. Kóchilas (2,670 ft.) in Skýros and 'Stó Hypsiló (2,257 ft.) in Skópelos. On the latter, as also on Mt. Nissátika (1,145 ft.), are Greek trigonometrical stations. These mountains are usually rounded and blunted on top, and many of the heights are rounded caps, but some of the ridges (e. g. in Skópelos, Chelidrómia, and Gióúra) have sharper profiles and sides often precipitous. The lower heights often take the form of hilly plateaus, and in the lower and softer schist regions there

are, especially in the three larger islands, a fair number of small, fertile, and often marshy valleys and lowlands.

In Skýros there is one brook with a constant flow, besides numerous fine springs in the northern part. Skíathos and Skópelos are well provided with water, but in the southern half of Skýros as well as in most of the Eremónesia the supply is scanty.

GEOLOGY

The geological formations of the Northern Sporades point to their connexion with Euboea and the Magnesian peninsula and to a less degree with Chalcidice, hardly at all to a connection with Lémnos and the other islands on the Asiatic side.

At the lowest level is a layer of fully crystalline rocks (mica schist and phyllite). Over this in Skíathos and Skópelos is a layer of transitional rocks of uncertain age, in which occurs the chalcedony of Skíathos. On top of this in all these islands is a massive chalk covering, partly crystalline. Higher still are the argillaceous schists containing limestone layers, and on the three largest islands of the Magnesian group black and yellow argillaceous schists (sandstone and chalk) represent a still higher level. Serpentine, which occurs in the lower schist layers, penetrates through the limestone to the higher. Traces of volcanic rocks occur—trachy-andesite and volcanic glass in Skýros and basalt in Psathoúra. (See also p. 187, and for general structure and formation p. 10.)

FLORA AND FAUNA

The more northerly climate of the Northern Sporades has produced and maintained a sturdy vegetation, and the soft, fresh, and green appearance of some of these islands offers a pleasing contrast to the Cyclades. All of them appear to have been well wooded not very long ago, the commonest trees being pines (usually the Aleppo pine, *Pinus halepensis*), though planes grow in the moist warm valleys of Skíathos, and in Skýros are a few evergreen oaks (*Quercus coccifera* and *Q. ilex*). In the valleys and on the lower hills dense maquis scrub abounds. The destruction of forests, however, for ship-building, firewood, and charcoal has proceeded rapidly. Skýros

(especially the southern part) and Gioúra are almost denuded ; the forests of Skópelos are practically exhausted, and those of Chelidrómia are rapidly becoming so. But, unlike the Cyclades, these islands quickly replace the loss with vigorous scrub or pasture, and they thus retain their green appearance. Skýros, Gioúra, and some of the smaller islands are desolate-looking and have mostly only phrygana and other stunted scrub upon them ; other islands are covered, to the summits of their round hills, with green scrub (e. g. Skíathos), while Pipéri has still untouched forests.

Game is fairly plentiful : wild pigeons in Skíathos and Kýra Panagiá ; rabbits in Chelidrómia. On Gioúra wild goats still exist on the east cliffs ; they are protected, and this island is a Government preserve. Fish abound in the waters around Chelidrómia. In the caves of the north-east coast of Skópelos seals are sometimes seen, and the lobsters of Skýros and Skíathos are well known.

CLIMATE

The climate of the Northern Sporades in general approximates to that of the eastern coastal districts of Greece (see Vol. I, Chap. II), but with modifications due to insular position, lower average elevation, absence of dominating mountain masses, and greater exposure to prevailing winds. These latter—cold from the north and north-east (mainly in summer) and warm when from the south-east (mainly in winter)—have a moderating influence, and the climate is more equable than that of the adjacent mainland. On the other hand sudden changes in the wind often cause sudden changes of temperature, and the destruction of the forests may also be producing greater sharpness of climatic conditions—less rain and moisture and colder winters. The sheltered valleys, often forested and abounding in water, are moist, warm, and often malarious ; the uplands are bleak and exposed.

For convenience the data given in Vol. I (pp. 41–51, Group II) for the climate of the eastern coast of Greece has been re-printed below.

TABLES

The position of the meteorological stations is as follows :

Vólo	alt. 26 ft. ; lat. 39° 24' N. ; long. 22° 58' E.
Chalcis	alt. 36 ft. ; lat. 38° 27' N. ; long. 23° 30' E.
Athens	alt. 351 ft. ; lat. 37° 58' N. ; long. 23° 44' E.
Nauplia	alt. 20 ft. ; lat. 37° 33' N. ; long. 22° 48' E.

MEAN TEMPERATURE

(in degrees Fahrenheit)

	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Vólo	45	49	53	59	66	76
Chalcis	48	50	53	59	68	78
Athens	49	50	53	59	68	76
Nauplia	49	51	54	60	68	76
<i>Mean</i>	47·8	50	53·2	59·2	67·5	76·5

MEAN MONTHLY MAXIMUM TEMPERATURE

(in degrees Fahrenheit)

	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Vólo	64·8	67·8	71·2	78·8	83·1	94·1
Chalcis	63·3	68·2	71·6	81·3	90	97·2
Athens	62·9	65·4	70·4	77·2	88	93·5
Nauplia	66	68·9	72	77·5	86·2	94·3
<i>Mean</i>	64·2	67·6	71·3	78·7	86·8	94·8

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
81	80	74	66	55	50	Vólo.
83	82	76	68	56	50	Chalcis.
81	80	74	67	57	52	Athens.
82	81.5	76	68	59	53	Nauplia.
81.7	80.9	75	67.2	56.8	51.2	<i>Mean.</i>

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
96.3	97.5	91.9	84.2	77.4	68.2	Vólo.
101.5	101.5	94.6	86.4	75.2	67.6	Chalcis.
98.6	98	92.5	84.3	73.9	66	Athens.
97.7	99	93.2	89.2	78.3	69.3	Nauplia.
98.5	99	93	86	76.2	67.8	<i>Mean.</i>

MEAN MONTHLY MINIMUM TEMPERATURE

(in degrees Fahrenheit)

	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May</i>	<i>June.</i>
Vólo	28	31	34	39	50	57
Chalcis	32	33	35	40	51	58
Athens	32	33	36	44	51	59
Nauplia	32	34	36	42	50	58
<i>Mean</i>	31	32.8	35.2	41.2	50.5	58

MEAN MONTHLY RAINFALL

(in inches)

	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Vólo	1.69	1.77	1.81	1.30	1.42	1.02
Chalcis	2.71	1.85	1.81	1.42	0.83	0.55
Athens	2.05	1.46	1.34	0.83	0.79	0.67
Nauplia	2.28	1.81	1.89	0.94	1.02	0.67
<i>Mean</i>	2.18	1.72	1.71	1.12	1.01	0.73

RELATIVE HUMIDITY

(percentages)

	<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Vólo	74.5	73	71.1	70.1	65.2	65.6
Chalcis	77.5	76.1	73.1	67.8	61.4	58.2
Athens	74	72	69.2	64.4	59.7	54.2
Nauplia	72.8	70.1	68.3	66.7	63.5	60
<i>Mean</i>	74.7	72.8	70.4	67.2	62.4	59.5

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
63	62	55	48	37	31	Vólo.
63	63	55	50	39	34	Chalcis.
65	65	57	52	42	35	Athens.
64	65	58·5	53	40	35	Nauplia.
63·8	63·8	56·4	50·8	39·5	33·8	<i>Mean.</i>

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
0·51	0·67	1·18	1·69	2·64	2·16	Vólo.
0·19	0·43	0·91	1·14	2·20	2·76	Chalcis.
0·27	0·35	0·55	1·73	2·87	2·44	Athens.
0·27	0·55	1·06	2·28	3·03	3·66	Nauplia.
0·31	0·50	0·92	1·71	2·68	2·75	<i>Mean.</i>

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
63·4	60·7	65·1	74·3	76·6	73·8	Vólo.
53·6	54·4	61·2	70·4	74·1	78·4	Chalcis.
47	46·3	55	66	73·3	74·5	Athens.
54	54·9	59·8	68·5	72·6	75·5	Nauplia.
54·5	54·1	60·3	69·8	74·1	75·5	<i>Mean.</i>

HISTORY

The importance of the Northern Sporades to Greece has always been out of proportion to their intrinsic economic value. In ancient times, when shipping was coastwise and the enemies of Greece lay in the north and east, these islands, and particularly the Magnesian Islands, were of the highest strategic importance. The Magnesian peninsula and the north-east coasts of Thessaly and Euboea generally are steep, exposed, harbourless, and inhospitable. The Northern Sporades possessed harbours, water, wine, olives, and above all timber. Skíathos especially, with its harbour, covers the entrance to the Trikéri channel and the north-eastern approaches to Greece (gulfs of Vólo, Lamía (Zeitun), and the passage between Euboea and the mainland, with the port of Chalcis). From their position and resources therefore these islands were capable of being either a northern maritime bulwark of Greece, or conversely, in the hands of an enemy, a serious menace. To a naval power such as Athens, but even more to a continental military invader like Alexander or Xerxes, their possession was the prerequisite of liberty or conquest. Skíathos served as the naval outpost of the Hellenes against the hordes of Xerxes, and again in the Roman era it was the naval outpost of Mithridates against the Romans.

From the earliest times also these islands were the home of pirates. In their inaccessible and stormy seclusion and in their numerous harbours the islanders found safe retreats, and piracy was not stamped out here till late in the last century.

In ancient times the resources (mineral and agricultural) of these islands seem to have been greater or relatively more important. For this reason also they were a continual bone of contention, and their possession was disputed by successive powers, Athenian, Macedonian, Roman. In the Middle Ages Skýros was occupied by a member of the Ghisi family, and all these islands were held by the Venetians, Byzantine Greeks, and Turks in succession. They lay, however, aside from the main

movements of history and were little troubled by their owners. Their chief energies were centred in piracy, and their robber wealth was itself often the prey of others. Their interests have always been largely maritime, and, though more naturally attached to Thessaly, they were incorporated in 1832 in the new kingdom of Greece. Their importance has been diminished by the advent of steam, the opening up of larger sources of supply (e. g. of chrome ores), and the exhaustion of their timber. On the other hand their agricultural products and cattle have come more to the fore, and their ships and sailors continue famous. As late as 1897 Skiathos served as a naval base for the whole of the Greek fleet in the war with Turkey, and even to-day their position commanding the northern trade-routes and their harbours make their possession a vital necessity to Greece.

RACIAL AND SOCIAL CHARACTERISTICS

The islanders are a simple hardy seafaring race, showing considerable enterprise. The resources of their islands are not great, and Skýros and the Eremónesia are poor. A great part of the population of the Magnesian Islands lives abroad either as sailors or as emigrants. They are found in all parts of the world (America, Australia), and they either return to their homes wealthy or send money to their families. The people who remain are thus often well-off, and the inhabitants of the town of Skópelos display considerable comfort, modernity, and intelligence, the result of experiences abroad. Skýros, as in so many other ways, is exceptional, and the people of that island lead a poor and isolated existence. Many of the Eremónesia are inhabited only by herdsmen or monks, and in all of them living conditions are hard and desolate. Racially the people of these islands are said to be more purely Greek than even those of the Cyclades, and they certainly display characteristics (honesty, trustiness, kindliness, and seafaring propensities) more clearly insular than do the latter.

AGRICULTURE, MINING, SHIPBUILDING, AND OTHER INDUSTRIES

The character and products of cultivation in the Northern Sporades are broadly the same as those in the Cyclades (see p. 27), but there are some significant differences. The people of these islands are more seafaring, and in former days were a piratical race. They display neither the energy nor the ingenuity of the inhabitants of the Cyclades in agriculture, and much available ground is either left untilled (as in Skíathos) or not used to its full extent (as in Skýros, where the fields lie fallow for two successive years). The vigour of the climate in producing pasture leads to cattle-rearing as an alternative for shipbuilding as the forests disappear, and in general these islanders prefer the life of herdsmen to that of farmers. Finally, besides the ordinary southern fruits, pears, plums, and cherries grow in Skópelos, and wherever possible fruit-growing is resorted to.

The geological formation determines the cultivable areas : the lower schist areas are fertile, well watered, and usually well cultivated ; the limestone heights, which are extensive, are devoted to cattle and, especially, goat-rearing.

Skópelos, Skíathos, and Skýros are the only islands of any agricultural importance. Skýros, though the largest, is the least productive, being for its size one of the poorest islands agriculturally in the Aegean. In Skíathos cultivation could be extended and intensified, but its products and those of Skópelos are mostly of good quality. The Eremónesia show signs of former more extensive cultivation, but are now poor and barely support their scanty population.

Skópelos in its fertile valleys had many fine gardens, but of late years, owing, it is said, to the destruction of forests and decrease of the rainfall and springs, many of these have been replaced by vines. It still produces a good deal of fruit (oranges, citrons, figs, almonds, besides northern fruits). In the other two large islands the orchards are good but small. Skópelos and Skíathos both grow vines on their lower slopes, the light red wine of the former being of repute. Skýros,

Skíathos, and Skópelos produce together 12,000–15,000 tons of olives yearly. The fruit is of inferior quality, does not keep well, and is used chiefly for making oil. Little grain is grown in any of the islands. Skópelos is the most fruitful island, and particularly its northern division, Glóssa.

Cattle-rearing is generally more important than agriculture. Goats flourish in the maquis scrub in all the islands, and their milk furnishes good cheese. In the Káto Kámpo (Skýros) cattle, sheep, and goats are reared, and Skýros has a breed of small ponies. The cattle of the Magnesian Isles, particularly of the three larger islands, are bigger and better developed than most Aegean beasts. Bee-keeping is important in Skópelos.

The building of sailing vessels was formerly an important industry in all these islands. There are still yards capable of building small vessels in Skíathos and Skópelos, but the exhaustion of the timber supply has driven many craftsmen to cattle-rearing, while others seek work in yards abroad. The men of Skópelos build a few small craft at the harbour of Hágios Demétrios in Chelidrómia, where good timber still exists.

Besides herdsmen, wood-cutters, and charcoal-burners, there are sailors. An unusually large proportion (perhaps as much as one-third) of the population are engaged in seafaring pursuits, and the sailors from these islands (except Skýros, which has no seafaring population) are found in all seas. Fishing—around Skýros and Skíathos lobster-fishing—employs a good many persons.

Skýros has mineral resources of some value. Its marbles—white and variegated—have been known and prized since antiquity. Recently they have been worked by the British firm of Grecian Marbles (Marmor), Ltd. (cf. p. 33). Chrome iron is abundant and has been worked spasmodically, latterly by a Greek company. Gypsum, vermilion ochre, and china-clay are worked, and coloured pottery is made on the island. Other ores (iron-manganese, copper) are said to occur, as well as lignite and a fine building-stone (*póros*), but none of these are at present worked. The mineral resources of Skýros appear to be capable of profitable development.

TRADE AND SHIPPING

Skópelos exports olives, olive-oil, fruits, cattle, honey, and wine, the latter going mainly to Constantinople and Black Sea ports. Skiathos exports olive-oil and lobsters, and Skýros small quantities of wine, cheese, and cattle, besides mineral products. All these islands depend on imported flour, and besides this their imports are the usual manufactured goods and colonial (sugar, tea, coffee, &c.) products. The standard of living is highest in Skópelos, and it thus takes a large part of the trade. Many of the Eremónesia are poor, isolated, and practically self-supporting.

The people of the Northern Sporades (excluding Skýros) have always been active in maritime pursuits. It has been said that 'every householder' of Skiathos and Skópelos 'is the owner, part-owner, or skipper of a ship'. These ships they mostly built themselves, and in 1887 Skópelos possessed 92 sailing vessels with a total tonnage of over 5,100 tons and Skiathos 110 of about 5,250 tons in all. These were nearly all engaged in foreign (Mediterranean) trade, and returned home only for repairs. With the decline of forests and shipping the islanders betook themselves to other pursuits. Most of the present trade is concerned only with the island products, and an increasing amount of it (as of the trade of most Aegean isles) is done by the regular Greek coast and island steamship lines, or, as in the case of the mineral products of Skýros, by cargo steamers.

HARBOURS AND COMMUNICATIONS

The Northern Sporades possess one or two good harbours besides a number of useful havens. Skiathos harbour, though small, is safe in any weather. An almost equally safe and much roomier harbour is the bay of Treís Boukkais at the south-western corner of Skýros. Port Planétes at the north of Kýra Panagiá is somewhat difficult of approach, especially with north winds and for sailing vessels, but the landlocked water inside is always calm. Other bays (e.g. Kalamítza

bay in Skýros, with its branches, Arázo and Linariá bays; Péfko and others of the south-west coast of Skýros; all the harbours of Skópelos; and Vasilikó harbour between Chelidrómia and Xeronési) are useful in certain weathers only, and the accommodation in all of them is limited.

Water (except in Pánormos bay in Skópelos) is obtainable in small quantities only, sometimes not at all, and food also is scarce. The harbours of the Eremónesia are usually destitute of either. The three chief harbours of Skópelos (Skópelos, Stáphylos, and Ágnontas bays) are united by a road designed to allow of the use of any of them according to the direction of the wind, but no wheeled vehicles are available.

Loading and unloading facilities, quay appliances, &c., are scarce. At Linariá and Péfko bays (Skýros), and perhaps at one or two other places where ore or marble is loaded, are limited facilities, and where the coasting steamers call boats and lighters can usually be found. Small shipbuilding yards (for caiques) exist at Skíathos and Skópelos and at Hágios Demétrios bay in Chelidrómia, and timber could be got at the last-named. A quarantine station exists in Skíathos harbour, and ships also perform quarantine in Ágnontas bay (Skópelos).

The harbours of these islands derive their chief importance from their position off the exposed north-east coasts of Euboea and Thessaly and athwart the route to Salonica from the ports of mainland Greece (Chalcis, Vólo, Piraeus). They serve as havens in the sudden storms which arise in these parts, but the presence of numerous rocks, reefs, islets, and shoals makes the navigation of the whole group difficult and sometimes dangerous.

In normal times Skýros, Skíathos, and Skópelos are served by regular Greek coasting steamers running between Piraeus and Salonica and putting in also at Vólo and the ports of Euboea (Kóumi, Chalcis, &c.). These steamers call twice a week at the islands mentioned, and one steamer per week calls at Glóssa, the northern port of Skópelos. The same three islands are connected telegraphically with the mainland

via Euboea. The Eremónesia on the other hand are isolated in all these ways and are approached only by sailing boat.

The only road is that already referred to, which connects the three chief bays of Skópelos. The inland tracks are mostly steep but not so difficult as those of the Cyclades. There is a breed of small ponies in Skýros, but these animals are not capable of heavy work.

ADMINISTRATION, AREAS, AND POPULATION

The areas of the islands are uncertain, and the population also fluctuates greatly, but in the three more important islands the following represent approximately the density of population :

		Area (square miles).	Population.	Population per square mile.
Skópelos	. . . .	47	6,520	138·7
Skíathos	. . . .	23	3,387	147
Skýros	. . . .	79	4,172	52·7

These figures are based upon the census of 1907. All the islands show a slight increase upon the returns for 1896, due probably to the decline of seafaring and the increase in agricultural pursuits, emigration remaining about the same or slightly increasing. The Eremónesia are sparsely populated (about 15 inhabitants to the sq. mile).

Practically the whole population is contained in the towns or villages, outside of these being only a few herdsmen's and cultivators' huts and monasteries. Skópelos is the largest town (pop. 4,658) ; next come Skýros (pop. 3,500) and Skíathos (pop. 3,387). Besides this Glóssa (in northern part of Skópelos) is the only village of any size (pop. 1,431).

The whole group forms a district of the *nomós* of Euboea. The gendarmerie centre for the Magnesian Islands is Skópelos, and for Skýros Kouími (Euboea). There are custom-houses and local courts in the towns of Skíathos, Skýros, and Skópelos.

[For Money, Weights and Measures, and Calendar see above, p. 42.]

DETAILED DESCRIPTION

Under the title of 'Northern Sporades' are usually included all the islands which lie on the western side of the Aegean and off the east coast of Thessaly and Euboea. This includes Skýros, which has little direct connexion with any land except Euboea, and a better grouping treats Skýros as an adjunct of Euboea and gives to the other members of this group the more appropriate name 'Magnesian Islands'. For the purposes of the general survey given above the conventional grouping has been adopted, but in the detailed description which follows Skýros is treated separately, and the other islands are grouped together, the scheme in outline being :

Skýros

Magnesian Islands :

Skíathos

Skópelos

Eremónesia :

Chelidrómia

Xeronési and islets

Kýra Panagiá

Gioúra and other islets and rocks.

SKÝROS

Area : 79 square miles. (Length : 18 miles. Maximum breadth : 9 miles.)

Population : in 1907, 4,172. (In 1896 it was 3,712.) Population per square mile : 52.7.

Products : corn, fruit, wine, olive-oil, honey ; cheese, cattle, fish in small quantities ; marble, gypsum, iron ore, vermilion ochre, china-clay.

Physical Features

Though usually included in the Northern Sporades, Skýros has no close relations with any island except Euboea, from whose nearest point (Cape Kouími) it lies about 22 miles to the north-east.

The island consists of two parts so distinct as to appear from a distance almost as two islands. The two parts differ

in shape, elevation, and general features, and, as numerous islets and rocks on the south-west prolong the coastal forms, the outline of the group is most irregular. The northern part of the island is a rhomboid or diamond-shaped mass with its diagonals lying north-north-west to south-south-east and east-north-east to west-south-west respectively. To the south-eastern corner of this is attached by a narrow neck (2 miles broad) a nearly oval portion of about the same length (north-west—south-east) as the rhomboid but only about half its breadth. This southern part runs in the same direction as the northern, and the lie of the whole island is north-west—south-east, but from the central west coast of the lower part there projects a large foot-shaped promontory with its toe pointing south-east.

The north-east coast, exposed to the open sea and gales from that quarter, is steep and has been worn into straight general lines, innumerable tiny coves and off-lying rocks being the only indication of former irregularities. It consists of two parallel stretches of nearly straight coast (those of the northern and southern parts of the island respectively) united towards the middle by a simple curve. At the south end of this curve is the only opening on this coast, the double bay of Achílli, which from the eastern side helps to form the island's central isthmus.

The more sheltered west and south-west coast is extremely broken. The largest opening lies about the middle and is called Kalamítza bay. It is a large and almost circular water framed about by the main coast on the north and east, by the foot-shaped promontory and the Diavítí rocks (Inner and Outer) on the south, and by the long narrow islet of Valáxa (about 3 sq. miles ; alt. 670 ft.) on the west. It is thus almost landlocked and has outlets only towards the north-west and south-west. Within it are smaller branch bays, that in the middle of its northern shore, Linariá, being the most used harbour of the island. Another, Arázo bay, at the north-east corner is just opposite to Achílli bay, and between these two bays lies the narrowest part of the island, here less than

2 miles wide. The second largest bay is Treís Boukkais (Treboúki). It is like Kalamítza bay, but smaller, and lies farther along the coast to the south-east. Nearly circular in form, it is enclosed on three sides (east, north, and west) by the main coast and the large promontory mentioned above, and on the south by the islets Sarakéniko (about $1\frac{1}{2}$ sq. mile) and Platý, which lie athwart its entrance and leave only two narrow exits to south-west and south-east. Just east of the latter entrance is that of Rénes bay, a small but deep inlet in the south coast. North-westwards from Kalamítza bay are Péfko, Phokás, and Óros bays and to the north-west Kalógriais bay, all wide irregularly V-shaped bays open towards the south-west and west and separated from one another by large rough promontories.

Besides the islets already mentioned Erínia, a long narrow rock, and Skyrópoulo of rounded shape (area nearly 2 sq. miles ; diameter $1\frac{1}{4}$ mile ; max. elevation 617 ft.) lie west of the centre of Skýros and about 4 and 8 miles respectively from it. The northern extremity of Skýros is prolonged by a chain of rocks and reefs 4 miles long, and off the north-east coast are numerous islets and rocks.

Internally the island falls into two parts joined by an isthmus. The southern part, called Tó Vounó, is occupied by a compact oval mountain mass with flattened top and convex form. On three sides (north-west, north-east, and south) it is steep and closed, but towards the south-west it spreads out in low hilly spurs and forms the large south-western promontory already described. On top this mountain has weathered into a series of large and often quite enclosed hollows, rounded caps, and ridges. The highest part, Mt. Kóchilas, is 2,670 ft. high. Watercourses, broad and open at the top, have cut deep ravines in its lower flanks. To the north-east and south-west there are springs under the limestone limit, but there are no valleys or streams, and the whole area is arid and barren.

Between the southern and northern parts of the island lies an isthmus, known as the isthmus of Kalamítza, formed by

two transverse valleys enclosing a ridge. The more southerly of these valleys, stretching between Arázo and Achilli bays, is low, straight (north-north-east to south-south-west), about 2 miles long, and $\frac{1}{4}$ to $\frac{1}{2}$ mile broad. It is probably an ancient sea-channel and is now largely covered with drift-sand; it practically divides the island in two. The second valley—about a mile to the north-west—is formed by two glens diverging (to the south and north-east respectively) at an obtuse angle from a low watershed. Together they form a single narrow and crooked glen with outlets in Achilli bay on the north-east and Linariá bay on the south. Between these two valleys is Mt. Hágios Elías (alt. 1,680 ft.), a round-sided steep limestone-topped ridge with twin peaks.

The northern part of Skýros, everywhere lower than the southern, is a confused mass of hills, plateaus, and valleys. Across its greatest breadth (south-west-north-east) stretches a loose range of heights, from Mt. Óros (alt. 1,050 ft.), which forms the extreme western promontory, to Mt. Málla (alt. 1,857 ft., the highest point in the northern part of the island) near the north-east coast. The intervening heights, which include Hypsilé Ráche (alt. 1,155 ft.), have rounded caps and admit between them easy passes. On both sides (to south and north) of this lateral range stretch broad hilly plateaus. That to the north, probably the result of maritime abrasion, has a decided slope; from its highest and steepest edge parallel to the north-east coast it shelves away to the west coast, where it terminates in a short but abrupt ridge. On its eastern border is Mt. Olympiani (alt. 1,191 ft.). Between this plateau and the north-east coast is a narrow steep coastal range.

In this northern part there are numerous small glens and streams but only two lowlands of importance. In the south-east, opening on the central east coast, is the valley of Hágios Demétrios, so called from a monastery on its northern slopes. It trends north-east, is broad in its upper part, but narrows as it approaches the sea, where, however, it is joined by side-valleys. It contains a large perennial brook fed by a fine spring, and with the adjoining lowlands of the central east

it forms the largest depression in the island. The second lowland occupies the extreme northern corner of Skýros. It is a semicircular hollow fed by converging streamlets, and is called Káto Kámpos. It is connected with the Hágios Demétrios valley by a long groove-like depression parallel with the north-east coast and lying between the north-eastern coastal range and the large plateau mentioned above. This depression mounts to a central watershed and then slopes down to the Hágios Demétrios valley on the other side. It thus forms a gangway between the two most fertile parts of the island and is important for that reason.

The water-supply of Skýros is only moderately good, though the northern half of the island is better off in this respect than the southern. The latter has a few fine springs at its north-western corner (east and south-east of Arázo bay), where the junction of schists and limestone is laid bare on the steep declivity, but apart from these the whole southern portion is arid, and the inhabitants rely on rain-water caught in cisterns. In the northern half there are several fine brooks and springs (notably those of the Hágios Demétrios valley), and the Káto Kámpos and the Arázo valley are partly marshy.

Geology

Skýros contains three main schist complexes, besides some late sedimentary deposits and traces of recent eruptive rocks. The lowest schist layer is composed of mica schist and phyllite pierced with great masses of serpentine. These lower schists appear in the valleys, which are mainly cut out of them.

Above this is spread a thick limestone covering, which forms all the important heights and gives the island its characteristic features. The southern part of the island appears as a solid limestone mass, the underlying schists coming to the surface only at the north-western corner. Where limestone and schist meet are springs. The limestone contains much marble, pure white or streaked and spotted in many beautiful varieties and colours, occurring mostly in the southern and south-western parts.

Above the limestone is another schist layer, composed mostly of argillaceous schists. The serpentine penetrates through the limestone covering to those upper schists and contains chromite, and at the junction of the limestone and serpentine and argillaceous schists iron and iron-manganese ores occur. These deposits are mainly in the northern part of the island, north-west of the capital.

The sedimentary rocks. (yellow sandstone, called *póros* stone) occur on the north-east coast, and traces of andesite and basaltic glass are found in various places.

The schists and limestone of Skýros are related to those of the Greek mainland and Euboea, and the folding resembles that of Euboea. Similarly the lignite which occurs in the sandstone of Skýros corresponds to that of Koúmi and Chelidrómia.

Vegetation and Cultivation

In the uncultivated valleys oleanders and maquis scrub grow. The northern hills have upon them woods of Aleppo pines (*Pinus halepensis*), and the large northern plateau also has numerous clumps of these trees. In the hollows and even on some of the ridges and caps of the southern part are woods of evergreen oaks (*Quercus coccifera* and *Q. Ilex*) and maple, though the trees are frequently stunted. The rest of these uplands are covered only with phrygana scrub.

In spite of its comparatively well-preserved forests Skýros has a desolate and inhospitable aspect, and for its size it is one of the least productive islands of the Aegean. This is due largely to the preponderance of limestone in its surface. Where this is broken through there are fertile schist valleys. The most productive part is the valley of Hágios Demétrios, where are well-watered gardens. The Arázo valley is now covered with sand except at its south-west end, and here, as in the southern half of the Linariá valley, are cornfields and pasture. Káto Kámpos is devoted to cattle, large flocks of sheep, goats, ponies, and other live-stock being pastured there. The long hollow which connects it with the Hágios

Demétrios valley contains vines, olives, fig-trees, besides corn-fields, though part of it is uncultivated.

In general the fruit-gardens are scattered and small, and not much corn is grown. Nearly all the most fertile parts—from Káto Kámpos down to the eastern half of the Linariá valley, which contains fruit-gardens—lie in the north-east, and of this area Skýros, the capital, is the natural centre.

The southern part of the island, except for the fruit-gardens at the north-west, supports only goats and pigs, mainly the property of a monastery. Cattle-rearing is more important than agriculture, and even what land is cultivated is allowed to remain fallow for two years in succession. Skýros ponies roam wild for a good part of the year, but are used for stamping out the corn after harvest. They were once tried for drawing the Athenian trams before these were electrified, but too many were required for one vehicle, and the experiment was a failure.

Industries and Trade

The island possesses considerable mineral resources, which are at present only partly exploited. The most important output is that of marble. Skýros marbles, white as well as variegated, were famous in antiquity and were mined by the Romans. The British company, Grecian Marbles (Marmor), Ltd., has worked them recently, the chief quarries being at 'Stás Lekánais just north of Rénes bay (in the south of the island), at the south end of Valáxa Island, on Sarakéniko Island, and at Atsitsa near the head of Péfko bay on the central west coast. The quarries employ about 250 workmen and are equipped with modern machinery.

Near this latter are also iron mines, worked by a Greek company founded in 1907. The ore contains 46 per cent. iron, the rest being mainly chromium compounds. Chromite also occurs just north of Mts. Kriónas and Diánemos in the northern half of the island. Lignite is found near Trachý in the main north-eastern valley, and *póros* stone, a fine building material, in great quantities north of Achilli bay.

All these have been worked in ancient or recent times, but are not at present exploited. Besides these gypsum, vermilion ochre and china-clay are worked, and (coloured) pottery is made on the island. Alluvial gold is said to have been found in the valleys, and copper and iron manganese are reported to exist.

Other than mining, there are no industries of importance. The lobsters of Skýros, caught by the fishermen of Linariá, are well known, but in spite of its excellent harbours the island possesses practically no boats and no seafaring population. There is a small distillery in the capital. Alcohol, citrons, wine, and cheese in small quantities, besides cattle, lobsters, and mineral products including about 3,000 tons of marble annually, are exported. Imports are flour, manufactured and colonial (tea, coffee, sugar, &c.) goods.

Inhabitants, Population, and Settlement

The people of Skýros lead a poor and isolated existence; very few of them emigrate, and few of them ever leave the island. The history of the island is equally obscure and unimportant. Anciently part of the Athenian, later of the Roman Empire, it was later occupied by the Venetian family of the Ghisi. In 1276 it was conquered by the Byzantine Greeks, and was again held from 1453 till 1470 by the Venetians, after which it fell to the Turks. At the establishment of Greek independence it became part of the kingdom of Greece.

Of the total population (1907) of 4,172 (about 52 to the sq. mile) the greater number live in the capital. The fertile parts (Káto Kámpo, &c.) have small settlements (e.g. Trachý in the main north-east valley), often occupied only in summer. The mines and quarries have workmen's settlements near them, and shepherds' huts are found in parts, especially in the south, which is otherwise almost uninhabited. At Linariá, the chief port, is a village of 210 inhabitants (C.H.), occupied largely by immigrant fishing families apparently of fairly recent advent.

The capital, Skýros (pop. 3,500, P.T.O., C.H.), which has

always occupied the same site, stands on a flat-topped but steep-sided hill, which forms the termination of a ridge skirting the north-east coast in its curved central part. It thus commands the entrance to the Hágios Demétrios and other fertile valleys in the vicinity. The town occupies the northern and eastern slopes of the hill and has a gleaming white but withal poor appearance. Its houses are flat-topped, usually of two stories, the lower of stone, the upper of wood. Near by are the ruins of the mediaeval stronghold overlooking a steep cliff and the sea and conspicuous from the north-east. There is no harbour; a sandy beach serves for drawing up small boats, and a little to the northward an off-lying reef forms a sort of mole capable of sheltering small craft, but the coast is exposed.

Harbours

The south-west coast abounds in safe and roomy harbours and numerous coves. Kalamítza bay is an almost circular water (diameter about $3\frac{1}{2}$ miles), landlocked except on the south-west and north-west. The south-western entrance is the largest and is about a mile wide, but is partly blocked by the Diavítí and Éxo Diavítí rocks, which are dangerous. The north-western entrance, between the north end of Valáxa islet and Skýros, is extremely narrow and difficult and is impossible for vessels of over 12 ft. draught. Arázo bay (Arázo Road) in the north-eastern corner of Kalamítza bay is semicircular, has a sandy beach and anchoring-ground in 19–10 fathoms, but northerly winds, sweeping through the valley at its head, are apt to be dangerous.

Linariá bay in the north shore of Kalamítza bay is the chief port of the island. There is good anchorage, but the water is rather deep. A small fishing village lies near it, and a track over the mountains and down the Hágios Demétrios valley leads to the capital ($5\frac{1}{2}$ miles).

Treís Boukkais (Treboúki) bay south-east of Kalamítza bay is semicircular (about $1\frac{1}{2}$ mile broad and as much deep). The islands of Sarakéniko and Platý lie across its mouth

and leave three entrances, all of which are deep in the middle, the most westerly (called Mármora) being the best. This bay offers excellent shelter in northerly gales and is resorted to in such cases, but it suffers from dangerous land-gusts from the surrounding heights.

North of Kalamítza bay and Valáxa islet is Péfko bay ('Stén Angáli). This is the chief port for the export of marble and iron ores, and there is a small quay with 23 ft. of water alongside and appliances for loading on a limited scale. The bay is not altogether safe, especially in westerly winds. Phókas and Óros bays north-west of Péfko bay are open, contain deep water, and are sometimes used by small vessels in northerly gales.

Communications

In normal times Skýros is visited by three Greek coasting steamers per week. These connect it with Salonica, Vólo, and other islands of the group outwards and with Euboea and Piraeus inwards. Before the war a steamer of the *Deutsche Levant Linie* used to call weekly. There is direct telegraphic communication with Euboea. Within the island there are, with the exception of a road connecting the marble quarries with Péfko bay, only rough tracks.

MAGNESIAN ISLANDS

(SKÍATHOS, SKÓPELOS, EREMÓNESIA)

(1) SKÍATHOS

Area : 23 square miles. (Length : about 6 miles. Maximum breadth : 5 miles.)

Population : in 1907, 3,387. (In 1896 it was 2,790.) Population per square mile : 147.

Products : figs, wine, olive-oil, fish, timber, sailing vessels.

Physical Features

Skíathos, the nearest of this group to the mainland, is separated from the Magnesian peninsula by a channel little

more than 2 miles wide, of irregular depth (maximum about 16 fathoms), and studded with numerous rocks. It is in every way more closely related to the Thessalian mainland than to Euboea, from which a channel about 8 miles wide and over 100 fathoms deep divides it.

The shape of the island is that of a rough parallelogram, of which the longer sides face north-west and south-east, and the shorter north-north-east and south-south-west respectively. The longer sides have both a broad inward curve, thus narrowing the island somewhat at the middle. The south coast has two open but fairly deep bays, but the north coast, which is slightly convex towards the north, is closed. At the north-east corner is Skíathos bay, formed by a hilly promontory (about a mile long) projecting southwards. It shelters a roomy and safe harbour. At the head of this, as also at the head of the southern bays, are marshes and salt lagoons fed usually by small streams.

Off the coasts of Skíathos are numerous rocky islets, especially on the south-east. The most important of these are Árko and Trypeté—close together—and Marangós, all south-east of the entrance to Skíathos harbour; Áspro a little farther north; and Tzougriás (Megálo and Mikró) off the south-eastern corner of the island. Most of these are rocky and rise to about 200 ft., Árko to over 300.

The dominating feature of Skíathos is the large dome-shaped mountain mass of the north and north-east. The top of this is flattened so as to form an undulating plateau, whose highest point, called 'Stén Skían, rises only slightly above its surroundings. It is 1,427 ft. high, or according to the Admiralty Chart (where it is called Stavros) 1,450 ft. The sides of this plateau, though at first gently shelving, lower down fall more steeply, and are succeeded on the north and north-west by a hilly terrace overlooking the sea, and on the east and south-east by low hill-country. Its sides all round are furrowed by deep and well-watered ravines. Towards the south the round domed mass is continued by a broad ridge, which narrows and sinks in height until it terminates in the south-western corner of the island.

The part west of this is triangular in shape and is occupied by a ridge which from a broad base (lying north-south) in the east rapidly narrows to an apex in the extreme south-western corner of Skíathos. This ridge is higher at its northern edge, where it falls steeply to the coast, and highest at its north-eastern corner (1,089 ft.). Towards the west it sinks considerably. It is separated from the heights in the eastern part of the island by a depression formed by two valleys running north and south respectively to the coast. These valleys are divided by a watershed of only 270 ft. and thus form a continuous hollow. Farther west are two similar but shorter and broader depressions reaching from coast to coast, which so cut the central ridge across as to make it almost unrecognizable. All these valleys open towards the south on the bays referred to above.

The features of Skíathos are soft and rounded, and inland intercourse is not difficult, but the coasts are often bold and steep. Other than those already mentioned, the only valley is that stretching north of Skíathos harbour to the north coast and separating the northern heights from the small coastal range which forms the harbour on the west. There are abundant springs and streams; the valleys are often very damp and the coastal areas marshy and malarious.

For the climate of Skíathos see p. 179 above.

Geology

The western part of the island is composed entirely of crystalline schists (mainly mica schists and gneisses), whose folding resembles that of the related schists of the Magnesian peninsula. Farther east is a great welter of less fully crystallized schists containing layers of marble. On the islet of Búrzi, just in front of the capital, chalcedony is found embedded in the marble. Over these metamorphic schists is spread a massive limestone covering, which forms the surface of the domed plateau in the north. The limestone, which resembles that of the eastern mainland, descends far down the sides, but it has been cut through by numerous deep stream-

beds, and at the junction of limestone and underlying schists are numerous springs. The south-eastern corner of the island is composed of argillaceous schists.

Vegetation and Cultivation

From the sea Skíathos is one of the most picturesque and agreeable of the smaller Aegean islands. This is due partly to its soft domed form but largely also to its fine forests. The limestone uplands are covered with a dense scrub of kermes oak, through which appear, here and there, the glistening chalk cliffs. The northern ravines, deep and moist, contain splendid groves of planes, and lower down the schist slopes support a flourishing maquis scrub. The capital appears against a background of wooded hills, and the ridges of the south-west are densely grown with tall maquis interspersed with Aleppo pines, and here game (wild pigeons, &c.) is plentiful. The forests of Skíathos have been a great source of wealth throughout its history, but a considerable part of the ground now occupied by them could no doubt be cultivated.

The chief area of cultivation is in the east and north-east, on either side of the capital. The hilly lowlands here are covered with olive groves, and about 200,000 gallons of oil are produced yearly. In the valleys are vineyards and sometimes watered fruit-gardens. The plain north of Skíathos harbour is devoted mainly to grain. To the north-west, on the hilly terraces mentioned above, is a small and isolated but rich area of cultivation, producing corn, olives, and wine. The western valleys are only partly utilized, and in this direction in particular cultivation is capable of great extension and would have the advantage of good soil (schists), plentiful water-supply, and easy communications.

Industries and Trade

The possession of a good and conveniently situated harbour coupled with that of fine forests has always encouraged sea-faring occupations to the detriment of agriculture, and in

ancient times Skiáthos was noted for its shipping and fishing industries as well as for its wine. To-day its forests are somewhat depleted, but there are always some vessels upon the stocks which lie on the shore of Skiáthos harbour. Sailing vessels of moderate size can be constructed, and in 1887 the island possessed a fleet of 110 vessels of 5,254 tons in all. These vessels are entirely engaged in Mediterranean trade and return only for repairs. They are manned by men of Skiáthos, a great proportion of whom are thus constantly absent from home. Fishing is also important, and lobsters are exported in large numbers. Silk is produced, but on no great scale. In the capital are two steam flour-mills, and, in addition to fish, olive-oil is exported.

Inhabitants, Population, and Settlement.

The position of Skiáthos, off the harbourless east coasts of Euboea and Thessaly and on the route from the gulfs of Lamía (Zeitun) and Vólo to Salonica and the north-east, early made it of importance to sailors in bad weather. Its possession of a good harbour and of forests suitable for shipbuilding encouraged permanent occupation. Its position, along with that of the whole group, gave it a strategic value, and in the fight of the Greeks against Xerxes, as again against the Turks in 1897, Skiáthos was the outpost of the Greek fleet. Both Greek and Roman sea-power strove for the possession of the island. In the Middle Ages it belonged to Thessaly, but later on it became a piratical centre and was itself, on account of its robber riches, often a prey of pirates, and piracy died out in comparatively recent times.

The translation, in the Middle Ages, of the capital to a romantic and inaccessible position in the northern corner of the island was due to piracy. Here a small peninsula, girt with steep cliffs, juts into the sea. There are landing-places for small boats on either side, but the narrow neck is cleft by a chasm, and the only approach from the land side is by a drawbridge. The ancient town, Kástro, is fortified with strong walls and a massive gate, but it is now a wilderness of ruined

houses and gardens. The capital, **Skíathos** (pop. 3,387, P.T.O., C.H.), was removed to its present site in 1829. It stands on gentle hills on the western side of the harbour. In front of it is a small rocky islet, and it encompasses a tiny side-bay. On either side are small cultivated plains, and behind are olive groves and forested hills. On the low shores of the harbour are the quarantine buildings and shipbuilding yards. The town is modern, well built, and roomy, but owing to the proximity of swamps is unhealthy. Also, as most of its men are away, it is very sleepy.

Other than a few shepherds who inhabit the uplands and the west, and three monasteries on the north-western and south-eastern slopes of the northern height, the population is confined to the capital.

Harbours and Communications

Skíathos harbour in the north-east is an inlet shaped like an inverted V. It is $\frac{1}{2}$ mile wide at its entrance and about $\frac{3}{4}$ mile deep. Two islets, one just off the town and one more in the middle, lie in its entrance, which is partly protected by the islands of Marangós and Tzougriás (Megálo and Mikró; farther to the south-east). There are numerous shoals, but there is good holding-ground, and the harbour is safe from all winds, though sudden squalls from the north may cause inconvenience. At the quarantine station (opposite the capital, on the eastern side of the harbour) is a small mole. The capital lies on a projection at the south-western corner near the entrance. Farther in on low ground are the shipbuilding yards.

There are no other good harbours: the bays on the west and south have deep water and rocky bottoms, and are not safe.

In normal times Greek coasting steamers call twice a week, connecting with the neighbouring islands and Salonica, Vólo, Euboea, and Piræus. The telegraph line from Skópelos to Euboea passes through Skíathos. Inland communication is only by track, and the contours are gentle.

(2) SKÓPELOS

Area : about 47 square miles. (Greatest length : $12\frac{1}{2}$ miles. Breadth (at S. end) : over 5 miles.)

Population : in 1907, 6,520. (In 1896 it was 5,302.) Population per square mile : 138·7.

Products : wine, olives and olive-oil, fruits, honey, timber, sheep and goats.

Physical Features

Skópelos is the largest and most important of the Magnesians group. Separated from Skiathos by a channel a little over 4 miles broad and about 55 fathoms deep, it forms the southern corner and a good part of the shorter (or north-western) arm of the boomerang-like figure of this group. Its general lie is thus north-west to south-east, and in this direction its length is just over 12 miles. Its shape is that of a thin isosceles triangle with apex (somewhat rounded) pointing north-west and its base (5 miles long) facing south-east. The south-western corner of the triangle is, however, missing.

The north-east coast, exposed to the full force of sea and wind from that direction, is, like that of the most similarly situated Aegean islands, closed and precipitous. The only openings on this side are Skópelos bay towards the south-east, a fairly deep and oblong opening facing the north-east, and a little farther north a narrow inlet at the mouth of a deep valley facing north. A feature of this coast is its large caves, often containing stalactites. These, when at sea-level, are a favourite resort of seals; when inland, of goats. The south and south-west coasts are more irregular and have three fair-sized bays—Stáphylos on the south, Ágnontas to the south-west, and Pánormos on the central west coast. Below Glóssa (in the north-west) is a much smaller semicircular bay with a sandy beach. Off the west coast are several rocks and islets.

The north-western or thin part of the island is occupied by a single ridge stretching from the extreme north to a line marked by the valley from Pánormos bay and the deep north-eastern valley already mentioned. Along this line, stretching

across the island, the northern ridge terminates abruptly. Broad, rounded, and lower (highest elevation 1,155 ft.) in the north-west, this ridge rises and undulates sharply as it proceeds south until at its south-western corner are several heights over 2,100 ft. ('Stó Hypsiló, alt. 2,257 ft., where there is a Greek trigonometrical station; Mt. Délphi, alt. 2,149 ft., just south of it; and another about as high close by). These elevations are featureless round caps, but the ridge as a whole, whose sides are concave towards the west and convex on the east, falls steeply to the sea on the north-east and has precipitous upper faces on the west. It is eroded on all sides by small streams. The southern part of the island is composed of a lower hill-land with elevations of from 1,000 to 250 ft. and large valleys.

At the head of all the bays mentioned are valleys, nearly all of them connected by passes over watersheds generally lower than 600 ft. In the south-eastern corner of the island is a high isolated ridge (alt. 1,785 ft.), falling steeply and with great cliffs to the north-east passage between Skópelos and Chelidrómia, but shelving gently on the west and south-west.

The chief valley of Skópelos lies at the head of the bay of that name. It is a large semicircular depression, well watered and fed by numerous side-streams. The valleys at the heads of the south-western bays have already been referred to. In the west, just opposite Dása—a small conical wooded island 100 ft. high, lying about a mile off the coast—is another fair-sized plain, and in the north-western part of the island are many cultivable depressions. Streams and springs are numerous, and water is plentiful.

Geology

The metamorphic schists (blackish and green mica schists) with limestone layers of eastern Skiathos are continued in north-western Skópelos. Here too is a massive limestone covering (in the middle and south but not around the capital) whose upper layers are marly and contain Foraminifera. Traces of serpentine also occur. In the vicinity of the capital is a still

higher layer—answering to the upper schist layer of Skíathos—of black and yellow argillaceous schists and greywacke sandstone.

Climate

Skópelos lies open to the cold northern and north-eastern Balkan winds, and its climate is cool and invigorating. The destruction of forests has probably influenced conditions, and the cold is said to be sharper in winter, and rain and springs more scanty, than formerly.

Vegetation and Cultivation

The pine forests, once luxuriant, have been largely thinned and are still mercilessly burned to secure pasture. But, unlike the Cyclades, the more northern climate of the Magnesian Islands encourages vegetation, and the place of the forests is quickly taken by dense maquis scrub or good pasture. The southern hills around the bays of Stáphylos and Ágnontas are still covered with fine pine forests, and in the valleys is maquis scrub. The central heights are covered with this same scrub—except where it has been recently burned off—and here are but few remains (clumps and single trees) of the former forests. The appearance of the island is green, fresh, and pleasing.

Agriculturally Skópelos is the most important island of this series. There are two main areas of cultivation—in the south and in the north-west. They correspond to the appearance of the schist formations and are separated by the central limestone mass. In the southerly, called after the capital, the valleys and hill-sides are usually well cultivated. The valley-bottoms contain fine fruit-gardens, which produce, besides the usual Mediterranean fruits (figs, oranges, citrons, and almonds), the more northerly varieties, such as plums, pears, and cherries. Many of these gardens have in recent years failed owing to the decreasing water-supply, and their place is taken by vineyards and olive plantations. The lower hill-sides are covered with vines yielding a good light red

wine, and higher up are splendid olive gardens. The plain of the capital is particularly productive in all these three directions. The hollows and hill-sides of the northern area (called, after its principal town, Glóssa) are devoted exclusively to vines and olives and almonds. Of recent years a certain amount of tobacco has been grown.

Very little grain is grown, but the live-stock of Skópelos (sheep, goats, &c.) are particularly vigorous and well grown, and on the central heights they find abundant pasture. Bee-keeping is also of importance.

The island produces yearly about 100,000–130,000 lb. of black olives and 130,000 gall. of olive-oil; 30,000 gall. of wine; 100,000 lb. of almonds, besides pears and other fruits; honey in large quantities; and sheep and goats. About one-fifth of the olive production and two-thirds of the wine (and this of better quality) and nearly all the almonds come from the Glóssa district.

Industries, Trade, and Shipping

Oil, wine, fruits, honey, tobacco, and small cattle are exported in considerable quantities, the wine going largely to Constantinople and Black Sea ports. The value of the exports is about £4,000 annually, and of the imports about £2,500.

Shipbuilding was formerly an important industry, and there is still a shipbuilding yard where small sailing vessels are built. But with the exhaustion of the timber supply cattle-rearing largely supplanted this industry, and the Skópelos builders either seek work in foreign yards or ply their trade on a reduced scale in the neighbouring north-eastern islands, where wood is still to be had.

In 1887 the island possessed 92 sailing vessels of a total tonnage of over 5,100 tons. A great proportion of the male population are shipbuilders or sailors, and in the latter capacity they are found in all parts of the world. Most of the island trade is carried in boats belonging to the island, but some goes by the coasting steamers.

Inhabitants, Population, and Settlement

Skópelos, anciently called Pepárethos, and perhaps better cultivated then than now, had a high reputation in antiquity not only on account of its agricultural and maritime riches but also because of its commanding position. In this respect it resembled Skiathos, whose fortunes it seems to have shared throughout.

The islanders are energetic, peaceable, and trustworthy. A large proportion of them live abroad, either permanently as emigrants (in America, Australia, &c.) or as sailors and journeymen workers, but a fair proportion of the emigrants ultimately return to their island. Emigration not only relieves the pressure of population within the island but brings to it considerable worldly experience and wealth, for the emigrants, even when they do not themselves return as 'made' men, usually send money home. Thus the place and people have an air of comfort, well-being, broad-mindedness, and modernity. In spite of this there still linger among the women traces of the ancient costumes.

The capital, **Skópelos** (pop. 4,658, P.T.O., C.H., gendarmerie head-quarters for all the Northern Sporades), stands on a hill on the western side of the harbour of same name, and occupies the same site as the mediaeval fortress. The town crowds up the steep hill-side, but extends more openly towards the plain on the west. The houses are high and compactly built; the lanes are crooked, narrow, and ill-paved, but well provided with shops; the only open space is on the sea-front. The climate is healthy, the sea-winds cool, and there is a good water-supply. The town creates an impression of genial prosperity, and is the centre of a prosperous district.

In the northern district, Glóssa, are two villages, Platána (Glóssa; pop. 1,431, P.T.O.) and Kléma (pop. 431) about 2 miles south-east of the former. They stand on high hill-sides abounding in springs, overlook the sea on the north-west, and are the centres of a prosperous agricultural district. There are numerous monasteries, mostly in lofty sites, and these and a few small farming and herdsmen's settlements contain the only population outside the places already mentioned.

Harbours

There are no good harbours. Skópelos harbour is used in summer. It is an oblong opening about $\frac{3}{4}$ mile wide at its entrance and about $\frac{1}{2}$ mile deep, and opens north-north-east. At its southern corner is a narrower bay penetrating more deeply inland. At the western corner of this, under a projecting headland to the north, is the capital, near which is an ancient but now useless mole. The best anchorage is in the north-western part of the bay, under cliffs, in 7-10 fathoms, but the harbour is not safe in north-easterly winds.

Stáphylos bay in the south-east is sheltered from north winds, and the coasting steamers put in here when Skópelos harbour is impossible. Water is obtainable in small quantities, and a road leads to the capital (1 hour's walk).

Pánormos and Ágnontas bays on the south-west are used in winter by small vessels; in other seasons they are deserted. The water is deep, but there is not room for large craft. Water is obtainable from a well in Ágnontas and from a fine spring close to the shore in Pánormos bay. A road leads from Ágnontas bay via Stáphylos bay to the capital (2 hours' walk), and a track leads up a valley and over hills and valleys to the capital from Pánormos bay.

Below Kléma and just north of it is a small semicircular bay with good anchorage in about 7 fathoms but open to the south-west and therefore unsafe in summer. Steamers call here, and water can be obtained, though it is of doubtful purity.

Communications

Greek coasting steamers in normal times call at Skópelos, the capital, twice and at Kléma harbour (for Glóssa) once a week. They make connexion with Skiáthos, Vólo, Salonica, Euboea, and Piræus. There is telegraphic communication with the mainland via Skiáthos and Euboea.

The island has one road, which connects the harbours of Skópelos, Stáphylos, and Ágnontas. From the plain of Skópelos it mounts a broad southern valley to a pass at 246 ft.,

whence it descends to the bay of Stáphylos shut in by wooded hills. Mounting these hills to the south-west, the road proceeds south-west over the coastal heights and turning north mounts to a pass and then descends to Ágnontas bay, which is girdled with soft pine-clad hills.

There are said to be no wheeled vehicles on the island. Tracks connect Pánormos bay with the capital, and the capital with Glóssa. They cross hills and dales but are not difficult.

(3) EREMÓNESIA

The Eremónesia, in spite of their name, seem formerly to have supported a fairly large population, and even now they are not uninhabited. Their population is, however, sparse, they are for the most part barren, and Chelidrómia, the largest, is rapidly being stripped of its trees. Thus, though taken together they nearly equal Skíathos and Skópelos in extent, they are comparatively unimportant, and have maintained throughout their history a poor and isolated existence, undisturbed except by pirates and piratical deeds. The group consists of Chelidrómia (popularly called Liadrómia and officially Halónnesos), Xeronési, Kýra Panagiá, Gióúra, Psathóúra, Pipéri, Skántzoura, besides numbers of smaller islets and rocks. By far the largest and most important is Chelidrómia, and this island and some of the others belong economically to Skópelos, and are frequented by shepherds and wood-cutters from that island. Those lying more to the north and north-east on the other hand are mostly occupied by colonists from the northern Aegean coast and particularly from the monasteries of Mt. Athos.

Chelidrómia (Liadrómia, Halónnesos)

Area : 30 square miles. (Length : 13 miles. Maximum breadth : $3\frac{1}{2}$ miles.)

Population : in 1907 (with neighbouring islets), 729. (In 1896 it was 680.)

Products : grain, wine, oil, timber, cattle in small quantities.

Physical Features.—This island, the largest of the so-called Eremónesia, which lies to the north-east of Skópelos, is

separated from the latter by a strait little more than 2 miles broad. In the middle of this strait are the two Hágios Geórgios islands. The larger of these is a steep hill with a deserted monastery and gardens upon it. At its western end is a shoal (one-third mile long), leaving a narrow but deep and clear passage between it and the steep cliffs of Skópelos. North-east of this island is the rock Mikró Hágios Geórgios, between which and Chelidrómia is a $\frac{3}{4}$ -mile-wide channel, deep and clear.

Chelidrómia is a narrow irregular oblong stretched in a north-north-east to south-south-west direction. Its south-western part (about one-third of the whole length) is lower and only about half the breadth of the upper portion, and inclines more to the west. The coasts of the northern part are for the most part straight, unbroken, steep, and on the north-west precipitous. At the north-western corner is a long promontory, terminating in Cape Iérakas, and just below this, on the east, is a small narrow inlet called by the same name. The thinner (southern) part of the island is more irregular, and here are numerous jagged indentations on both sides, but all open to the east or west.

The upper part of the island is occupied by a single ridge, rising in many places to over 1,500 ft. close to the north-west coast, to which it falls precipitously. The two highest peaks are 1,591 ft. and 1,502 ft. respectively. On the east this ridge first flattens out to a broad tableland (average elevation 800 ft.) and then falls somewhat steeply to the north-east coast. In the narrower (southern) part of the island this ridge is continued but on a smaller scale (altitudes ranging from 800 to 650 ft.), but in the extreme south-western corner, towering above the strait between Chelidrómia and Mikró islet, is Mt. Kalávolos (called Khilia on the Admiralty Chart) 1,000 ft. high. On all its flanks this ridge is furrowed by small ravines, but there are no valleys of any size, and water is scarce.

Geology.—The greater part of the island consists of a mass of white or light-grey limestone corresponding to that of

Skópelos. In the central east this limestone contains a zone of sandstone. On top of the limestone, as in Skópelos, are deposits of black and yellow argillaceous schists. In the narrow (southern) part of the island is a schist area : light-coloured marly schists of the kind common in Greece and the Levant, containing a seam of brown coal of marshy origin but undetermined age, probably akin to the similar deposits of Koumi (Euboea).

Vegetation, Cultivation, and Industries.—In the southern or schist portion, where the hills are lower and flatter, is a certain amount of cultivation. Here vines, olives, and corn are grown, and cattle of fine quality find pasture. The northern part of the island was covered with a vigorous forest of pines with an undergrowth of maquis scrub. Much of this still remains, but herdsmen, wood-cutters, and charcoal-burners—the only inhabitants of this northern part—have cleared all the northern parts, leaving only a desolate scrubby waste. Goats are pastured in great numbers on the uplands, and the destruction of the forests, for shipbuilding and charcoal, goes on rapidly.

The wood and charcoal are shipped from the small harbour of Hágios Demétrios in the central east, opposite Xeronési. In the same harbour shipbuilding is carried on in a small way, there being generally a small sailing vessel under construction. The adjoining slopes are cultivated—the only trace of cultivation in the northern parts. The island swarms with rabbits, and the neighbouring waters are said to abound in fish.

Population and Settlement.—With the exception of herdsmen, charcoal-burners, and a few cultivators, the whole of the population is contained in the capital. This, Chelidrómia (pop. 640, C.H.), is situated on a steep and windy limestone ridge (alt. 623 ft.) in the south-western corner of the island. It overlooks its small harbour north-east of it, and is conspicuous by reason of a large windmill. It is a poor and bleak village ; its site is reminiscent of former piratical days, and it itself is said to have once been a nest of pirates. Agriculture

and to a greater degree cattle-rearing are the means of livelihood ; seafaring is but little indulged in.

The island, anciently known as Íkos, seems to have been more important in antiquity, and to have shared the fortunes of its wealthier neighbours. The remains of the ancient capital, Íkos (now called Kókkino Kástro from the red conglomerates upon which it stands), occupy a sharp but low promontory on the east coast in the vicinity of several fertile valleys.

Harbours and Communications.—There are no good harbours but a good many inlets, especially in the southern part of the island, which can serve as havens in particular winds. Such are the openings near Kókkino Kástro, and another farther south. Iérakas bay on the north would serve the same purpose for small craft, but, like most of the other bays, offers only limited accommodation. Most bays have sandy beaches at their head, but water is unobtainable in any of them. The east coast is sheltered by Xeronési, and at Hágios Demétrios, where there is a small low promontory formed by marine accretions, is a sandy bay which serves as a small port, but it is not safe in northerly winds.

The island has no regular communications with the outer world, and is reached usually by sailing boat. There are only tracks inland.

Xeronési and Neighbouring Islets

This island, called on the Admiralty Chart Peristeri, lies east of and close to the northern half of Chelidrómia, from which its north-western point is only about 450 yds. and its south-western point $\frac{1}{2}$ mile distant, leaving deep and clear passages between. It has a ragged irregular form, its southern part being a flattish triangular plateau (highest elevation 817 ft.), to the north of which is attached by a rocky neck barely 300 yds. wide a long narrow curving double promontory. Its extreme length (north to south) is $4\frac{1}{2}$ miles, and it contains about 5 sq. miles.

There are numerous more or less sheltered bays on the east and south coasts, but the largest bay is on the west. This large

V-shaped opening, whose northern and southern shoulders approach to within $\frac{1}{2}$ mile of Chelidrómia, forms with that island a fairly landlocked water, 2 miles deep from the coast of Chelidrómia to its head. The openings are the passages referred to above. It is called Vasilikó bay, but except at its head, where there is an inner cove, it is too deep for anchoring. Opposite the head of Vasilikó bay is another small bay on the east coast, and between the two is the narrowest part of the island.

Xeronési is a waterless and featureless limestone mass, covered with maquis scrub; and deserted save by a few herdsmen with their goats.

Close north-east of Xeronési lies Lechoúsa (Likorima on Admiralty Chart), $\frac{3}{4}$ mile long (north-south), composed of schist.

About 3 miles south of Xeronési are the Dýo Adélphia, composed of one larger and one smaller islet and a number of rocks. They stretch in a north-north-east to south-south-west direction for about 5 miles. The largest, triangular in form, is of limestone, about 1 mile long, 520 ft. at its highest, and has cliffs on its eastern side. All these islands are uninhabited.

Farther south-east, about 11 miles south-east of Chelidrómia, and between it and Skýros, is the Skántzoura group, composed of one large islet and a number of small rocks mostly off its north-west, west, and south-west shores. The main islet is 3 miles long and stretches in an irregular curve from north to south. Its shores are ragged but devoid of harbours. It contains about 2 sq. miles, is flat and low, and probably composed of limestone. Good white marble is reported to have been found in it. It contains a monastery, the inmates of which are the only inhabitants.

Kýra Panagiá

After Chelidrómia the next island in the main north-eastern line of the Magnesian group is Kýra Panagiá (called on the Admiralty Chart Pelago), a curious-shaped compact island

of about $9\frac{1}{2}$ sq. miles, situated $4\frac{1}{2}$ miles north-east of Chelidromia and divided from it by a clear channel.

The form of the island is most nearly that of an oblong with rounded corners (length (north-south) about $4\frac{1}{2}$ miles; breadth (east-west) $2\frac{1}{2}$ miles), but at the north-eastern and south-western corners large irregular openings modify this shape considerably. The chief of the north-eastern openings is Planétes bay, an almost landlocked bifurcated inlet, entered by a long narrow channel from the east-north-east. The other large opening, in the south-west, is wide-mouthed towards the west, but curves southwards farther inland.

The internal structure is simple, consisting of two coastal ridges, one along the north-west and one along the south-east coast, separated by a depression. All three features are parallel, and stretch from north-east to south-west, the central depression (about $1\frac{1}{2}$ mile long) being between the two inlets mentioned above. Both coastal ranges fall steeply towards the sea, and the north-west and east coasts are steep and—except for a small circular bay in the middle of the east coast—cliff-bound. In the north-western ridge is the highest elevation (about 1,247 ft.), and in the south-eastern ridge, which at its southern end sinks and broadens westwards into a hilly plateau, is Mt. Nissátika (alt. 1,145 ft.), on which is a trigonometrical station.

The greater part of the island is composed of limestone, white, black and grey, but near the small bay in the east coast a black, yellow, and green schist layer appears, containing eruptive stones, quartz, and gneiss.

The northern part of the depression is cultivated, and there are a few fields on the southern plateau mentioned above, but the greater part is covered with maquis scrub and wild olives. Wild game (pigeons, but no rabbits or hares or partridges) abounds, and the scrub supports numbers of goats, but water is scarce.

The island and all upon it belong to the monastery, which is a *metóchi* of the great monastery of Hágia Láвра on Mt. Athos. The inhabitants of this, about 20 (including

herdsmen, field-labourers, &c.), form an isolated and self-supporting community living on their corn, cheese, and cattle, and whose only means of communication with the outer world is a small boat. The monastery is a fortress-like building standing on a height immediately south of the small eastern bay (which is the regular landing-place), and commands a fine view of the land, sea, and neighbouring islands.

Port Planétes, entered from north-north-east by a channel about $\frac{1}{3}$ mile long, and at one place only 90 yds. wide, opens out inside into two branches running south-south-west and south-east respectively. Inside it is about 1,000 yds. wide and as much deep at its greatest. The minimum depth of the entrance channel is $3\frac{1}{2}$ fathoms, and inside there are 5-9 fathoms. The entrance is risky for sailing vessels, especially in northerly winds, but the water within is always smooth.

The south-western bay, though larger, is deep, and offers only in one place limited accommodation for small vessels, and even this is unsafe in certain weathers. The small bay of the east coast is fit only for boats.

Gioúra and the Remaining Islets of this Group

Midway between Kýra Panagiá and Gioúra and almost due east of the former lie the three limestone islets, Gramoúsa, Strongyló, and Papounési (called on the Admiralty Chart Prassou, Kubi, and Papu respectively). Gramoúsa, the largest, is farthest to the south-east and has a steep east coast. The other two lie north-west of it, and Papounési has on it traces of former occupation.

Gioúra, which lies $2\frac{1}{2}$ miles north-east of Kýra Panagiá, is the last island of the Magnesian group. Five miles long, $1\frac{1}{2}$ mile broad, and with an area of about 6 sq. miles, it has the shape of a flint arrow-head, extremely sharp-pointed towards the north, and with slender curving body towards the south. The island is occupied by a single jagged limestone ridge (highest elevation probably about 1,650 ft.), running north-south from end to end, and overhanging the east coast, where

it falls away in rugged and inaccessible cliffs. The western flank is slightly gentler, and is furrowed by several ravines. There is a tiny bay at the southern end, but besides this hardly any landing-place.

Gioúra is a Government preserve on account of the wild goats (*Capra hircus dorcas*, Reich.) which still abound on the eastern cliffs and which are protected. The former forests have been destroyed, and the island is a waste of phrygana scrub and stunted caper bushes, inhabited by a few goatherds with their families (10–20 people in all) from Skópelos. The goats find shelter in the numerous mountain caves, which often contain fine stalactites, and have their entrances overgrown with thorn. Besides herdsmen, occasional charcoal-burners are the only regular visitants of the isle.

About $4\frac{1}{2}$ miles north of Gioúra is the islet of Psathoúra, the most northerly member of this group. It is quite flat and low, about a mile long and $\frac{1}{2}$ mile broad, and is inhabited by the lighthouse-keeper and his family, and resorted to at times by fishermen. There is a freshwater well at its southern end, and submarine freshwater springs are said to exist around the coast. A black volcanic stone, from which oil-presses are made, occurs in the island. It is a basalt, akin to those occurring in Thessaly, and perhaps to the volcanic glass of Skýros. South of Psathoúra ($\frac{1}{2}$ mile) is the small rock, Mýia.

Pipéri Island, presumably so called because of its shape, lies 6 miles east-south-east of Gioúra. It is an oval mass ($2\frac{1}{2}$ miles long; $\frac{3}{4}$ mile broad; area, about 3 sq. miles), girt with steep closed cliffs, and rising in a single flat-topped ridge, composed probably of limestone. The whole island is covered with a fine pine forest and belongs to a monastery. It possesses no harbours even for a boat, and is difficult of access.

GLOSSARY

<i>alyké</i> = salt-pans	<i>metóchi</i> = branch farm belong-
<i>áno, apáno</i> = upper	ing to a monastery
<i>ánti</i> = opposite	<i>mikró, mikrá</i> = little
<i>áspro</i> = white	<i>mýlos</i> = mill
<i>avláki</i> = cove	<i>néo, néa</i> = new
<i>chóra</i> = the town (used of the	<i>néri, neró</i> = water
capitals of islands)	<i>nési</i> = isle ; islet
<i>chóri, chorió</i> = place	<i>nesiá</i> = group of islets
<i>éremo</i> = desert ; barren	<i>óros</i> = mountain
<i>éxo</i> = outer	<i>palió, paliá</i> = old
<i>gaídaro</i> = ass	<i>Panagiá</i> = Our Lady
<i>hágios</i> (masc.), <i>hágia</i> (fem.) =	<i>pipéri</i> = peppercorn
saint	<i>platý</i> = broad
<i>hypsiló</i> = lofty	<i>pólis</i> = town
<i>kakó, kaké</i> = evil ; bad	<i>pótamo, potámi</i> = river
<i>kámpo</i> = plain	<i>-poulo, -poula</i> (suffix) = little ;
<i>kástro, kastrí</i> = fortress (often	miniature
used of any site with forti-	<i>psiló</i> = <i>hypsiló</i>
fications ancient or modern)	<i>pýrgos</i> = tower
<i>káto</i> = lower	<i>ráche</i> = mountain-ridge
<i>kókkino</i> = red	<i>révma</i> = stream
<i>krýo</i> = cold	<i>skála</i> (Italian) = port, landing-
<i>liména, limióna</i> = harbour	place, or stairs
<i>livádi</i> = meadow	<i>stavros</i> = cross
<i>loutrá</i> = baths	<i>stenó, stené</i> = pass or strait
<i>makró</i> = long	<i>vasilikó</i> = royal
<i>mávro</i> = black	<i>vathý</i> = deep
<i>méga, megálo</i> = great	<i>vounó, vouni</i> = mountain
<i>méros, mére, meriá</i> = part ;	<i>vrýsi</i> = spring
district	<i>xéro, xeriás</i> = dry

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A H A N D B O O K O F
G R E E C E

VOLUME II. PART 2

THE ISLANDS OF THE NORTHERN
AND
EASTERN AEGEAN

June 1919

NAVAL STAFF

INTELLIGENCE DIVISION

NOTE

VOLUME II of the *Handbook of Greece* deals with the Aegean and Ionian Islands—Part 1 with the Cyclades and Northern Sporades ; Part 2 with the islands of the northern and eastern Aegean ; Part 3 with Crete ; and Part 4 with the Ionian Islands.¹

For the purposes of Volume II a knowledge of Chapters II–XII of Volume I (i.e. general information concerning Greece as a whole) is assumed, but for convenience some sections of that volume are included, with alterations where necessary, in Volume II. Thus the section on money, weights and measures, and calendar, and the glossary have been adapted from Volume I. In addition the note on the climate of the northern and eastern Aegean islands has been based upon Chapters I and II of the *Handbook of the Climate of the Eastern Mediterranean* (I.D. 1117).

Good maps of these islands in accessible form are lacking. For Thásos there is an Austrian staff map (Kavalla sheet), of which there is a Greek reproduction (1:200,000 ; 1910) with contours. An improved sketch based on the Austrian map is to be found in the *Journal of Hellenic Studies*, vol. xxix (1909). For most of the other islands including Rhodes, Kós, and the Dodecanese the Admiralty Charts are good except in regard to place-names. These can be found better in Greek and German maps—notably those of Kiepert. Philippson's maps of Western Asia Minor (1:300,000 ; 1913) as far as the islands are concerned are based upon Kiepert, and his maps of Mytiléne (sheets 1 and 3), of Chíos, Sámos, Ikaria, and the Phoúrnoi islets (sheet 3), and of Rhodes, Kós, and the Dodecanese (sheets 5–6) are valuable, and for Mytiléne, Chíos, and Sámos are the best available. None of these maps are

¹ Part 4 has not yet (1919) been issued.

scientifically contoured, but their shading gives a fair idea of the topography, and the names are generally reliable.

The same system of transliteration has been adopted as in Volume I (see Vol. I, p. 195). The modern *official* Greek place-names have usually been adopted (e. g. Ikaría, not Nikariá), but in some cases the popular or local name has been preferred. A key to the more important Greek terms occurring in place-names or in the text will be found in the glossary ; a few are explained where they occur in the text.

The islands treated in this volume have been divided into two groups—northern and central. A third (southern) group is formed by the Dodecanese with Kós and Rhodes, but these islands do not as yet belong to Greece. The same general scheme of subdivision and order of treatment has been followed and the same liberty taken in details of arrangement as in Parts 1 and 3.

Some additional information about the islands of Mytiléne, Chíos, and Sámos, which came too late to be incorporated in the text, has been given in the form of an Appendix (pp. 191–3).

Recent and detailed information for many points touched on in this volume has not been available : the Admiralty will welcome additions and corrections.

Abbreviations

C.H.= Custom House. P.T.O.= Post and Telegraph (or Telephone) Office.

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MAP

THE AEGEAN SEA	<i>in pocket at end</i>
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SECTION I. NORTHERN GROUP

UNDER this heading are included the islands of Thásos, Samothráke, Ímvros, Ténedos, Lémnos, and Hagiostráte, besides the Mávro and one or two other islets. Of these Lémnos is the largest with approximately 180 sq. miles; next come Thásos (150–160 sq. miles), Ímvros (90 sq. miles), and Samothráke (70 sq. miles), while Hagiostráte has about $17\frac{1}{2}$ and Ténedos 13 sq. miles.

These islands do not form a close system. Indeed they offer some striking contrasts in physical features, in geological composition, and in historical and economic importance. Thus, while Samothráke is mainly a towering mountain resembling Mount Áthos on a small scale, Lémnos is in the main low and rather featureless. Thásos has fine forests and minerals; Lémnos is practically bare and appears to have no mineral wealth. In geological formation Thásos probably resembles the Macedonian mainland opposite it; the others appear to be more related to the Asiatic side and the Gallipoli peninsula. Thásos, Samothráke, Ímvros, and Ténedos have no harbours worth the name; Lémnos has one of the best harbours in the Aegean.

Nevertheless there are certain general considerations affecting in varying degrees the whole group. These islands have remained singularly obscure, though they are by no means unimportant. The reasons for this neglect are partly physical and climatic and partly historical and economic. In the first place they are remote, and some of them (e. g. Samothráke) are wild-featured. The difficulty of their coasts and treachery and violence of the seas and winds which encompass them discouraged intercourse. Also few of them had any great wealth to offer. The mines and forests of Thásos were of ancient fame, but the others are poor in agricultural and

perhaps also in mineral resources. They neither were favourably placed in relation to the trade-routes of the neighbouring mainlands nor did they develop a trade of their own. Thásos has always had an intrinsic, if secondary, importance, but the only great value—economic and strategic—of these islands lies in their position with regard to the Dardanelles and Black Sea trade. In modern, as in Athenian, times the islands of Ímvrov and Ténedos on account of their position and Lémnos on account of both its position and its harbour have a broader significance, and this is perhaps the most permanent influence in their history.

THÁSOS

PHYSICAL FEATURES

Thásos is the most northerly of the Aegean islands, being situated roughly $40^{\circ} 45' N.$, $24^{\circ} 40' E.$ close under the coast of Macedonia. From this coast, or that part of it lying between the gulf of Kavalla and the mouth of the Mesta (Kara Su) river, it is separated by a channel little more than $3\frac{1}{2}$ miles broad and less than 100 ft. deep. From Samothráke, the nearest other island of this group, it is separated by a sea-interval of a little over 36 miles, and in its physical structure, climate, and vegetation Thásos stands somewhat aloof from the rest of the group and is closely connected with the Balkan mainland.

The island lies within the 100-fathom belt which stretches along the Macedonian coast eastwards from the peninsula of Áthos, and even on the south where the sea-bed descends rapidly to the northern Aegean basin the 100-fathom line is nearly 5 miles from the coast.

Roughly circular in form but with a large blunt projection and a considerable bight towards the south-west, Thásos has a diameter of about 14 miles, an extreme length—from Cape Megálo Kladí (north) to Cape 'Stá Kókkina (south)—of 18 miles, an extreme breadth of 16 miles, and an area of 150–160 sq. miles.

The coasts are closed : there are few striking indentations or projections. Most of the former are long flat curving bights exposed to the open sea. Most marked of these are : the bay of Liména on the north coast opposite the islet Thasopoúla, stretching between the high ridged projections terminating respectively in Cape Osmaníeh (on the east) and Cape Megálo Kladí, the most northerly point of the island (on the west) ; the bay of Kástro (Hamadíeh or Potó) on the south-west, the western horn of which is Cape Képhalos, the most south-westerly point of Thásos. On the east coast are : farthest north, the square inlet ($1\frac{1}{2}$ mile (north-south) broad and the same deep) of Panagiá (or Potamiá) bay, enclosed between bold spurs on the north and south and backed (west) by a small plain and the steep slopes and crest of the main island ridge ; separated from this bay by the high tumbled spur of Mount Tsoutsoula lies, next south, the curving bay of Kínara opposite the islet of the same name ; and near the south-east corner of the island the deep triangular bay of Hágios Nikólaos (or Hágios Ioánnes), whose eastern promontory is the triangular spine ending in Cape Stavró (the most south-easterly point of Thásos) and which has on the west the curious foot-shaped peninsula of Alyké.

The coast-line consists of a succession of rocky stretches, mostly bluffs and headlands, interrupted by level beaches. There are few actual cliffs, but the hills generally plunge steeply into the sea. The level beaches—sand or shingle—lie generally at the head of bays or coves, the largest being in Panagiá, Kínara, and Kástro bays. The low strip along the north-west is skirted by a low flat shore for about $7\frac{1}{2}$ miles, the longest in the island.

Nearly the whole of Thásos is occupied by hills. The main ridge forms a high rampart curving roughly in accordance with the north and east coasts, only 5 miles inland at its western end and approaching to within 2 miles as it bends down along the east coast. The western shoulder of this ridge is formed by the pyramidal summit of Mount Trápeza ('Table' ; 3,700 ft.) $5\frac{1}{2}$ miles due south of Cape Megálo

Kladí, while $1\frac{1}{2}$ mile farther east, and crowning the Liména plain, is the bare crest of Hágios Elías (3,190 ft.). Thence the ridge, bending south-east, mounts to the pyramidal bluff of Mount Psarió (Hypsarió; 3,756 ft.), the highest point of the island. Continuing south-east for $1\frac{1}{4}$ mile, there succeeds Mount Tsoutsoula (3,080 ft.), and, 2 miles due south, Mount Kyriaké (2,625 ft.) opposite Kínara bay. Thence the ridge continues due south sinking, with one hill elevation of 1,310 ft., and runs down evenly as a spur, falling steeply on the sea west of Hágios Nikólaos bay. The northern and north-eastern faces of this ridge fall in steep declivities, sending out high spurs which terminate abruptly in the promontories of the north and north-east coasts. The upper crest is narrow, often escarped, and the bare grey cliffs are conspicuous standing out above the green forests. The spurs enclose the lowlands of Liména and Panagiá, and above the latter the descents are steepest, the Elías-Psarió ridge here falling first in precipices and then in abrupt slopes. Farther south Mount Tsoutsoula thrusts out a spur of wild tumbled hills to form the promontory between Panagiá and Kínara bays, and south of this the ridge lies steep-sided close along the east coast. On its south-west side the main rampart slopes down to a broad plateau occupying the centre of the island. This plateau has many elevations and depressions, but keeps a general level of 1,950–2,300 ft. It seems originally to have formed the remainder of the island and to have had a gentle inclination down towards the west and a slightly greater one down towards the south. Drainage, however, in these directions has cut the outer portion of the plateau into a number of ridges which, intersected by valleys, radiate out to the south, south-west, and west coasts. This erosion has been least towards the south, and here the plateau, cut only by a few coastal ravines, slopes evenly down and falls steeply upon a rocky indented coast. Towards the south-west and west the ridges and valleys are longer and more marked, and form a fan-like series of irregular steep-sided spurs, with numerous striking hills. These spurs maintain

as a rule an elevation of 1,300–1,600 ft. to within 3 miles of the coast, when they break away somewhat steeply upon the coast. The highest point in this western hill-region is Mount Matz (Hágios Asómatos ; 2,400 ft.), whose steeply escarped northern face makes it conspicuous from the north-west.

Thásos, with its bare-crested rocky ridge rising here and there to squat pyramidal heights, its lower sharply defined ridges, mounting crest beyond crest, its wooded heights and steep forested seaward slopes, is one of the most beautiful islands in the Aegean. Particularly from the north-west and north-east its aspect is characteristic, or when the upper crests, snow-crowned, stand out in sharp contrast to the soft green of the lower slopes and plains.

The main valleys lead south-west and west, those leading to other parts of the coast being mere ravines. The three longest and largest valleys have their heads high up on the central plateau and flow two into the bay of Kástro and one into the west coast north of Cape Képhalos. These valleys are fairly broad and easy. Those farther north are wilder and narrower, and all the island valleys are separated from each other by difficult and rough ridges. Besides the plains, more or less small, at the mouths of these valleys (e. g. those of Astrís, Potó, Hamadíeh on the south-west ; Mariés and Kakeráche on the west) there are only three worth mentioning. One is the plain of Liména, backing the large bay on the north coast. Triangular in shape, 2 miles long (east to west), and $1\frac{1}{2}$ mile deep (north-south), it is bounded on east and west by high and steep ridges which terminate in steep bold capes. At the apex (south) from which these ridges diverge is the conspicuous bare summit of Mount Hágios Elías, towards which a valley penetrates. Another plain lies at the head of the square bay of Panagiá on the north-east coast. The low sandy beach (about $1\frac{1}{2}$ mile long north-south) is backed by a strip of lowland $\frac{1}{2}$ – $\frac{3}{4}$ mile broad. Westward the plain, split in two by a projecting spur, runs up NW. and WSW. into two valleys, those of Panagiá and Potamiá villages respectively. The depression is flanked by high and steep spurs projecting

as promontories to the north and south of it, while behind (west) the ground mounts, first gently, then in abrupt slopes, to the lofty cliffs which hem in Mount Psarió's summit on the east. This plain is separated from the former by the 1,100-ft.-high north-east spurs of the latter mountain. Farther south, along Kínara bay, the hills fall so steeply over the coast that there is room only for a few narrow coastal strips of lowland with sandy beaches and shut in by high projecting spurs. Along the north-west coast stretches the only considerable piece of lowland in the island, a long strip, sloping up from the sea to the steeply rising hills behind, which are penetrated by valleys. Some of the upper valleys (e. g. that of Theológo) have flattish basins and small level places along their courses.

Thásos is abundantly supplied with water. From the main ridge descend towards the north and north-east coasts many sparkling brooks, rushing down the mountain-sides through the forests, regular alpine streamlets. The lowlands in these parts—particularly the Liména plain—are well watered and have numerous springs and fountains, and the streams of Liména, Panagiá, and Potamiá are perennial. The south-east coast, owing to the proximity and steepness of the hills behind, has mostly only torrents, and the south-south-east coast particularly is waterless. The western part of the island has numerous stream-courses, longer and gentler than those of the north-east but dry in summer (even as early as May) in the lower parts, except one flowing between Kástro and Theológo, which is perennial. The locality around Kástro bay is arid in summer, but water is always to be found higher up the valleys in the hills. Owing to the prevailing schistose composition of the island the drainage is superficial, and there are few caves, the only ones reported being comparatively small and in the sides of the western hills.

GEOLOGY

The island is composed mainly of crystalline schists and limestones alternating in layers, there being in addition a narrow strip of conglomerates (probably recent) stretching

along the west coast. Limestone and schists occupy about equal surface areas, the former predominating in the central and south parts of the island, the latter in the west and north. The two formations are in places much involved one with the other, but nearly all the higher ridges and crests are limestone (marble), as is seen in their striking cliffy crests and hard outlines. There is a marked difference in structure between the north and the south parts of the island, the layers in the former part being nearly horizontal, in the latter almost vertical. This has had a great influence on the weathering and accounts for the difference of feature and topography in the two parts of the island.

The limestone of Thásos is largely marble, glittering and white when freshly broken but turning grey with exposure. It is of coarse granular composition almost resembling sandstone. The schists are mainly mica schists containing quartzite, sometimes passing over to amphibolites and more rarely (mainly in the north of the island) to gneiss. The hills of the west are composed mainly of schists, interspersed with layers of marble. No traces of volcanic rock have been found.

Mineral deposits of some importance occur in the west of the island, smaller ones in the north-east near the coast. Those of the west seem to lie along an axis and to form a metalliferous zone following the curve of the west coast and including most of the hills from north of Kástro bay to near the Liména plain in the north. The schists are impregnated with metals but in so diffused a form as not to be commercially valuable. The limestones on the other hand—particularly at their lower contact with the schists—are richly impregnated and contain ore in paying quantity and quality. In the limestone it is lead and zinc which chiefly occur, with smaller quantities of silver, antimony, and barium ores. Iron and copper are widely distributed in both limestone and schists, though they are thought to be less frequent in the former. In spite of the explicit assertion of Herodotus, only insignificant traces of gold in modern times have been found in the quartz.

CLIMATE

Thásos lies on the line of climatic transition between the Mediterranean climate and that of the Balkans, and the meteorological data given for Kavalla (see below, pp. 182 ff.) apply in general to this island with certain modifications due to the local topography and the influence of the sea.

Summer extends from May to September, with temperatures mounting to 80°–94° F. in August, which is the hottest month. The mean temperature in August is about 75° F. January is the coldest month, with temperatures falling to 20°–30° F. (mean about 45° F.). The climate is less equable than that of most Aegean islands owing to the proximity of the mainland, the presence of considerable upland masses, and the less marked influence of the prevailing Mediterranean winds. Sudden storms with bitter cold may occur even in late spring. The climate of the north-eastern uplands is alpine, with cold nights in summer. The plains below these to the north and north-east (those of Liména and Panagiá) may be hot and stuffy in summer, but the heat is tempered by north winds. The hottest parts are towards the south and south-west, which are lower and shielded from the north winds by the northern ridges. The presence of large forests has a modifying effect upon the climate.

The winds in spring and autumn are very variable and violent. In summer cool north and north-east winds somewhat prevail. They are strong—at times violent—and continuous, but have not such a damaging effect upon the island as, for instance, in Crete. The winter winds, though less violent, are strong and fairly regular, prevailing from the south and south-west but also frequently from the north. The latter, coming from the Balkan highlands, are often very cold. A fair proportion of the winds come from the east.

The rainfall is greatest from December to February, when it amounts to about 3 inches a month. March and April are dull and rainy months but with fine patches. Rain also occurs in summer, usually along with thunderstorms. The rainfall

is naturally greatest in the high north-east parts, and the forests conserve the supply.

Snow lies upon the highlands for some time in winter. There is not much mist, the atmosphere is generally clear, and frosts are not common or of long duration.

(See also note on 'Climate', p. 177.)

FLORA AND FAUNA

The forests of Thásos are better preserved than those of most of the Aegean islands, and to them is largely due the attractive appearance of the island. Their influence on the climate and water-supply has already been noticed.

Over nearly the whole island the hill-slopes and all except some of the highest eminences are covered with a forest of firs and pines mixed with some beeches. Even Mount Psarió is wooded to the summit, and the pines in many places descend to the water's edge (e. g. on south-east coast). The firs are a fair size, but the other trees are mostly small. Planes grow thickly along the stream-courses in the valleys and in clumps on damp spots in the lowlands. Immense planes often grow around the village springs (e. g. in Panagiá) and squares; others are found in the valleys of Theológo and Potamiá. The upper slopes of some ridges are sparsely clad, and other patches (e. g. the heights around Theológo) are bare except for scrub. Scrub—consisting of arbutus, myrtle, heather, cistus, &c.—lines the ravines and the rocky edges of the lowlands, and towards the north there are areas of chestnut scrub with some plants rising into trees. Junipers grow along the south-west coast, and oleanders accompany the stream-courses. In the forests are numerous creeping plants (ivy, &c.), especially on the north-east mountain-slopes, and there also are found sloping stretches of alpine sward with wild flowers in spring, and in the forests the rocks are moss-grown. (For plants of cultivation see p. 22.)

There appear to be no wild animals of any size, but snakes, tortoises, and frogs are found. Eagles soar above the hills, and nightingales and other birds inhabit the woods and thickets.

HISTORY, ADMINISTRATION, AND INHABITANTS

From the earliest historical times an outpost of Levantine trade and settlement, Thásos was later colonized by Greeks and under them rose to fame and importance. The Greeks developed the natural resources of the island, and Thásos became noted for its wine, oil, marble, and minerals. In addition the mines on the mainland opposite were exploited. A large town arose in the northern plain and has left ruins which still indicate its size and splendour. From their forests the Thasians built a fleet, but the town was captured by Athens about 463 B.C. The population during this period has been estimated at 60,000 and the annual revenues at £40,000–£50,000. Thásos fell later under Macedonian and then Roman sway and was the provisioning base of Brutus and Cassius in their struggle against the triumvirs. Still of importance in Roman times—particularly for its marble (cf. triumphal arch of Marcus Aurelius discovered in the island)—it later fell a prey to the disorders and piratical terrors of the Middle Ages.

The Byzantine emperor John V (Palaeologos) bestowed the island (along with Mytiléne, Lémnos, Ímvro, Samothráke, and the town of Aínos) on Francesco Gatelusio, who had helped him to regain the throne in 1355. The Gatelusio family, originally Genoese, continued in possession until the fall of Constantinople (1453) and the subsequent conquest of Mytiléne by the Turks in 1462. The island, on account of its prevailingly Greek population, enjoyed the special privilege of being administered, under the archbishop of Maroneía, by nine minor Turkish officials aided by local elective councils.

The following centuries witnessed numerous piratical descents upon the island. The fear of piracy became the chief preoccupation of the inhabitants. Agriculture was neglected, and the island fell into obscurity and poverty. The villages were withdrawn from the coasts and perched on secure heights up the valleys. The population dwindled, and commerce vanished. Piratical depredations are recorded as late

as 1854, and security is a comparatively recent blessing in Thásos.

In the Greek War of Independence (1821) the Thasians enjoyed a momentary independence, but hastened to place themselves again under the protection of the Sultan, thereby preserving for themselves their former privileges.

In 1824 Sultan Mahmoud II, wishing to conciliate his dangerous dependant, bestowed upon Mehemet Ali of Egypt certain of the revenues of Thásos as his private property. These revenues—the tithe on agricultural produce, the cattle tax, and certain mining and forestry rights—were devoted by Mehemet Ali to a charitable institution in Kavalla, his native town. Subsequently the administration of the island passed into Egyptian hands and was governed by a *mudir*, assisted by a Greek Christian *próedros* elected by the islanders. There were, however, minor Turkish officials who collected such taxes—chiefly customs and military exemption (capitation) tax—as were not Egyptian. The taxes payable to the Egyptian Government were not heavy, and the chief value of the island to Mehemet Ali was the timber its forests afforded for his fleets. The Turkish taxes also were not excessive (the capitation tax amounted to about £560 per annum), and the island on the whole was not much troubled by its governors. There was considerable local autonomy, and native officials had control of trade. Nevertheless piracy and foreign rule combined to discourage enterprise, and the inhabitants relapsed into idleness and their island into obscurity. As above indicated, Thásos formed part of the *vakuf* (Moslem Church estate) of Kavalla; on the Christian side it continued to be subject to the Greek Orthodox archbishopric of Maroneía, on the mainland opposite.

In 1902 the Young Turk Government attempted the same policy of oppression and exploitation against Thásos as it had adopted towards the Dodecanese. The excuse was disorder alleged to have broken out upon a threatened increase of taxation. The island was temporarily occupied by Turkish troops; the Egyptian ascendancy was restricted to rights

over woods and mines, and the government became Turkish. Thásos was first incorporated in the *vilayet* of Salonica as a *kaza*, administered by a *kaimmakam*. Later it was raised to the status of a *sanjak* under a *mutessarif*, attached directly to Constantinople, and it was controlled by imported (partly Cretan) gendarmerie. In 1908 it was again constituted, for electoral purposes, a *kaza*, this time of the *sanjak* of Dráma.

Discontent prevailed, and as a result of the Balkan wars (1912–13) Thásos, along with other Aegean islands, was provisionally assigned in 1914 by the Great Powers to Greece. At present the island forms a subdivision of the Greek province (*nomós*) of Dráma.

The present inhabitants appear to be almost entirely of Greek origin, the only indication of foreign admixture being the village-name Voúrgaro, possibly a Bulgarian (Macedonian) settlement. The Turkish racial element seems insignificant. The climate is healthy—somewhat hot and waterless in summer in the south-west, and rendered unhealthy in the extreme north by the malarial breezes which blow off the marshes of the Mesta (Kara Su) on the opposite coast. With these exceptions the conditions are extremely favourable—mild and yet fresh—and in the north-east highlands the climate is invigorating. The mode of living and the food are as simple as those in most Aegean islands. The people have enough but not too much. Their houses are on the whole poor, low and roughly built against wind, but the best type—as found, for instance, in Panagiá—is two-storied, the lower story of stone, the upper of wood, and shows a fair degree of taste and comfort. The dress is like that of most of the islanders—a fez-like cap, baggy pantaloons, shirt, open jacket, stockings, and goatskin boots for men; a varied and sometimes elaborate apparel for women. But the native costumes are disappearing; European garb is becoming common, and the women tend to deck themselves in the bright tawdry cotton articles brought from Salonica. Greek is regularly spoken: the dialect was formerly garbled with many Turkish words, but this state of affairs is probably improving.

The accounts given of the character of the Thasians are discouraging. The people are said to be indolent, greedy, thievish, and bad-mannered, though peaceable and generally hospitable. They show no aptitude for progress or enterprise and are said to be ill educated. For this condition they are not altogether responsible. To the well-known evils of Turkish rule, with its damping and debasing influence, was added the continual fear of pirates and the disasters due to them. Hunted like wild beasts into the woods, their property and work continually despoiled, the Thasians, too few and too scattered to resist and too far from the centre of Greek life to gain outside protection, felt themselves isolated and neglected and sank into a state of apathy and despondency striking even amongst subjects of Turkey. Without the spirit or physical advantages of the Cretans, they refused—wisely, no doubt (cf. Samothráke, p. 34)—to take part in the war of liberation and have since progressively paid the penalty. Their industries, wits, and resources have degenerated; the impulses towards art and skill which they, like most island Greeks, display have been stifled; they are poor and content with poverty. Fond of gossip, they sit long hours in the cafés, discussing politics (often foreign politics for lack of nearer interests), money, and scandal.

Greeks of the Orthodox Church, they seem to be superstitious, and the influence of their churches as well as the backwardness of their economic life are shown by the currency system which till recently obtained. For lack of coin the Turkish copper coins were used. These the Thasians had the right to stamp—each village with its own superscription. The coin was accordingly stamped by the village church with initials denoting the village and the name of the church, and at first these coins seemed to have been current only in their own village. Later this was dropped, and the coins circulated in the whole island.

The state of affairs will no doubt improve under Greek administration, and Thásos will have education and an economic life corresponding with its position and resources.

INDUSTRIES

From the above remarks upon the character of the Thasians their economic condition will be evident. In ancient times Thásos was noted for its timber, wine, oil, minerals, and marble, but an economic description of the island to-day will consist largely of an estimate of its potential resources, which are considerable.

Agriculture and Kindred Pursuits

There is a fair amount of cultivable land, mostly around the coasts and particularly on the north side of the island. The plains of Liména and Panagiá are well watered and fertile, and the north-west lowland coastal strip is also good. In the south-west there are numerous valleys and delta-plains, drier than those of the north but available for culture, and many of the schistose hill-sides, now covered with forest or scrub, could no doubt be utilized if labour were available. Only a small part of this area is at present productive. The larger plains mentioned have olive-trees and cornfields, and many of the smaller ones (e. g. Kínara on the east coast and several in the west and south-west) are worked as summer holdings by the villages inland above them. The olive-trees of Thásos are fine and the fruit and oil good in quality, but the trees are neglected; a large part of the crop (which is gathered in mid-March) is often wasted, and modern methods are not yet generally employed in making and exporting the oil, though there is an olive-oil factory in Liména plain near the port. The oil is made between March and June, and is exported in August. Corn is grown sufficient only for two to three months of the year, the rest having to be imported, though the island is capable of producing all the corn it needs. Vine culture, though it still existed 50 years ago, seems to have disappeared, partly owing to disease but largely to the indolence of the people. It might be a flourishing industry.

Pastoral pursuits are equally neglected. There is good grazing-ground both in the plains and on the alpine pastures

of the north-east, but nearly all the island cattle are imported. As in the case of agriculture, the only well-managed farms are either *metóchi* (branch farms) of a monastery of Mount Áthos (e. g. the Vatopédi *metóchi* near Liména) or belong to non-native resident Greeks.

Bee-keeping was formerly a flourishing industry. The hives, which were of wicker-work, were placed near the pine forests, and the honey was reputed to acquire an excellent flavour from the pines. In summer the hives were taken across to the mainland for a few months. The industry seems to have fallen into decay, and honey is scarce in the island.

The native industries of weaving and spinning have died out, as in most Aegean islands.

Forests, Mining, Trade

The forests of Thásos have been famous since antiquity. The timber is suitable for small craft only, and the forests were more important formerly than now. Nevertheless the Egyptian rulers of the island drew valuable material from it for their fleets. Special forest laws—delimiting the boundaries of the villages, restricting the cutting and burning of the trees, and regulating the export—were in force last century. In recent years a small shipbuilding yard on Panagiá bay, producing good caïques, has been worked by a French company. Charcoal is obtained and exported, and with scientific attention the forests of Thásos would perhaps be commercially valuable.

The mineral resources of the island (see p. 15) are perhaps its chief potential wealth, but the Thasians show little aptitude for mining, and so far the profits from this industry have gone almost entirely to strangers.

Of minor importance are the clay deposits of the north. From these good pottery was once made, but this native industry has been killed by the advent for domestic purposes of the empty petroleum tin from the Black Sea. Marble was for centuries one of the chief products of Thásos, and along the south-east and south-west coasts (notably at

Alyké, a peninsula on the south-east) there are visible numerous ancient quarries. Marble-quarrying has been tried in recent times near Panagiá bay, but has been abandoned. Even the lime-kilns, operating 50–60 years ago, are disused.

The statement of Herodotus that he had seen extensive gold mines in the east part of Thásos and the traces of numerous ancient workings in the west drew attention to the island during last century. The gold mines in the east cannot be discovered, but there is the entrance to what appears to be an ancient mine in the hill-side about $\frac{1}{2}$ mile south-east of Liména. The Turkish and Egyptian authorities, attracted by tales of wealth, made several cursory examinations of the island for minerals, but did nothing more. In 1903 a German (Friedrich Speidel) obtained a 40 years' concession for working a mine near Voúves in the south-west part of the island, and a little later another 40 years' concession to work any mineral deposits he might find within two years. Work was started at Voúves in 1905–6, and the undertaking proved successful. Other workings were started farther north (near Sotéro) and were in full swing at the outbreak of the war. Work was stopped soon after, and late in 1915 the mines were reported sold to a Greek syndicate.

The two chief areas so far worked are at Voúves (north-east of the bay of Kástro) and near Sotéro and Kazavéte (in the north-west), both in enclosed hilly country and occupying only a small area. Some of the workings are on the site of ancient mines. The ancients seem to have mined for copper and iron, and left behind in their dumps valuable zinc ores. These dumps were first worked through, and mining proper was then started. The principal ore is calamine, which is found in all stages from almost free ore to ore with a high admixture of iron, lead, copper, and barium. The average ore yields 10–35 per cent. zinc. In the site at Marlóú, besides zinc, 10 per cent. of silver-bearing lead (2 oz. to ton) is extracted. The site at Voúves is worked out, but there is reason to believe that other and similar deposits occur in a mineral belt stretching from north to south along

the west part of the island, and some suitable sites have already been identified. The copper and iron ores are of more doubtful value.

The ore was transported from the two principal workings to the coast by light (Decauville) railways—one from near Sotéro to the *skála* (landing-place) of Sotéro on the north-west coast, another from the hills north-east of Kástro bay to the coast at Hamadíeh (Limenária). Smaller mines were served with mule transport. The ore from Sotéro was shipped from a small pier into sailing boats and taken to Hamadieh, where the crushing and refining took place. Here, along the bay, was a small settlement consisting of miners' huts, power and lighting station, hospital and engineering shops, staff offices, mills and furnaces, and storehouses. Calcination took place in eight furnaces, capable of treating 80 tons of crude or crushed ore daily. The power and light used was electricity generated by oil-driven engines. There is a small pier at Hamadíeh from which the ore was shipped on steamers. About 1,500 men were employed, and in 1906 the output of ore was over 22,000 tons.

Apart from this mineral export the only trade of the island is done through Liména, where steamboats from Salonica and Kavalla call. The exports, other than minerals, consist of olive-oil, timber and charcoal, and perhaps a little fruit—sent mainly to Kavalla, but also to Samothráke and other isles. Imports consist of manufactured and colonial goods—few and simple—and oxen and mules.

POPULATION AND SETTLEMENT

The population is rather over 15,000, distributed in some eleven villages besides hamlets and scattered huts.

The principal port of landing is Liména, a small collection of houses around a pier in the south-east corner of the large curving northern bay. The present hamlet is modern and has a custom-house, gendarmerie station, and limited accommodation. It serves as the *skála* (landing-place) of Panagiá. It is backed by a fertile plain and wooded ridges, and may

later rise to an importance more in keeping with the ancient ruins which lie scattered around. A track running south-east across the plain, up a pine-clad valley, and south-east over a steep wooded ridge leads to Panagiá (3-4 miles), the capital of the island (pop. 1,860), which is beautifully situated high up in an amphitheatrical valley looking south-east across the small plain and bay below and across the sea to Samothráke. High wooded mountains, descending in steep slopes, rise to the north, west, and south. The town has fine springs, good solidly built-houses (two-storied, marble and wood, with tiled roofs), churches, a school, and a telegraph office. In the vicinity are military barracks, formerly Turkish, built about 1907. Olive-oil is made in the town. In a similar valley site to the south, separated from Panagiá by a wooded mountain spur, is Potamiá (pop. 1,270), in the second valley leading down to the plain below. Potamiá also has fine springs, plane-trees, and wooded hills. Due east of Potamiá, at the south-west corner of the square bay, is the *skála* of Potamiá, where there is a small shipbuilding yard. The surrounding plain is fertile and covered with olives and corn. From Potamiá a track leads SSW., first up a steep and difficult forest ascent and across a 3,000-ft. ridge (where is a chapel) and thence SSW., sloping down to Theológo ($5\frac{1}{2}$ -6 miles; pop. 2,585), which was formerly the capital of the island, being situated inland safe from sudden piratical raids. It lies in an upper valley trending south and is surrounded by barren flattish hills. The valley is fertile in parts, and the town is green with plane-trees and has good springs and gardens and fairly good houses. It is connected with three parts of the coast: with Kínara (3-4 miles north-east) on the east coast, where the Theologians have olive groves and fields; with the bay of Thymoniá (the same distance to the south) by an easy valley; with the bay of Kástro (6-7 miles south-west) by easy valleys. The fields and olive groves around this bay belong to Theológo, and Potó serves as the *skála* of the village. Near the south extremity of the island is Astrís, straggling over the gentle west slope of a valley which opens ($1\frac{1}{2}$ mile to the south-west) just north of

Cape 'Stá Kókkina. Here is the *skála* of Astrís, at the mouth of a broad forking delta-plain. The position is hot and dry.

The settlement at Hamadíeh (Limenária), the former seat of the mining industry, has been described above. In the vicinity (close south-east) is Potó, a hamlet on the coast serving as the *skála* of both Theológo and Kástro, the latter $4\frac{1}{2}$ miles north-east up a valley. Kástro (pop. 1,135), is a type of the remaining Thasian villages of the west and north-west. These are: Mariés, Kakeráche, Sotéro, Kazavéte, and Voúrgaro, ranged in order, at intervals of about $2\frac{1}{2}$ miles, around the west part of the island. They illustrate, as clearly as Panagiá and Theológo, the influence of piracy upon the settlement. They are all situated inland, at distances of 2-4 miles, up valleys, and they nearly all occupy hill sites difficult of access and often romantic, amid wooded ridges. These wooded ridges isolate them from each other. As there is little cultivable ground in the upper valley, they each own their respective lower valley and delta-plain, which they cultivate. At the mouth of each valley is a small hamlet serving as a *skála* (landing-place), formerly a collection of huts in temporary use only. With the coming of greater peace and security there is a tendency to migrate back to the coast, where the ancient settlements no doubt were. The *skálai* will thus probably be the villages of the future. In the meantime there have grown up in several cases collections of huts (*kalývia*), half-way between the village and its *skála*, which saves the field-labourers the long daily journey to and from the village and its fields. The *skála* of Sotéro is at present a little mining port.

PORTS, HARBOURS, AND COMMUNICATIONS

The principal ports have been referred to above : they are few and poor. Off Liména is a roadstead in 9-10 fathoms, partly sheltered from the east, south, and west but unsafe in north and east winds. Liména itself has two small piers and fair shelter suitable for boats. The north-east coast, which is high, offers shelter in south-west gales, and Panagiá bay (with

a sandy beach and 3–10 fathoms) is suitable then, but is quite exposed to the east. Hágios Nikólaos bay (in the south-east) is useful in northerly gales but open to the south. The bays of the south-west and south are quite exposed in those directions. Hamadíeh (Limenária) has an iron pier 120 ft. long, 20 ft. wide, with 16 ft. of water at the end. There were two small cranes here before the war, besides some tugs, motor boats, and lighters. At Sotéro *skála* is a small pier (depth of water about 6 ft.) with some storsheds.

Owing to the poorness of the harbour accommodation and to the prevalence of strong and variable winds Thásos is badly served by shipping. Besides the usual caïques, which sail when they can, Greek steam-packets plying between Piræus and Kavalla and connecting with most of the neighbouring islands called (1915) twice weekly—outwards and inwards—at Liména, and carried mails.

A submarine cable (Greek Government) connects Thásos with Kavalla, and thus with Salonica. The line leads to Panagiá, where there is a telegraph station. From Panagiá an overland telegraph line leads west around the coast to Hamadíeh, where is the only other telegraph station. A telephone line—for police use only—connects Panagiá and Hamadíeh. There is also a Greek Government wireless telegraph station in the island.

There are no roads; the tracks (see above, pp. 26, 27) are steep and difficult, up precipitous forest ascents and across tangled ridges and ravines. The principal ones have been indicated in describing the villages. All the latter are connected by tracks and form a sort of inner ring concentric with the coast. In addition there are the tracks connecting the villages with their *skálai*. The light railways (or tramways) used for the mines have been referred to. Except for these transport is by mules or asses.

THASOPOÚLA

In the strait north of Thásos, about midway between the latter and the Macedonian coast, lies the islet of Thasopoúla,

a pear-shaped hilly mass composed mainly of three hills aligned from ESE. to WNW., the easterly reaching about 250 ft., the middle nearly 300 ft., and the western over 350 ft. The contours are soft; the islet is scrubby and probably deserted except for occasional shepherds. It may contain minerals.

SAMOTHRÁKE

PHYSICAL FEATURES

The island of Samothráke or Samothrace lies about 36 miles ESE. of Thásos and between it and the Gallipoli peninsula, the nearest point of whose coast is 27 miles south-east of it. From the Macedonian coast opposite (north) it is separated by a sea-passage of 24 miles, and from Ímvros, the nearest island, on the south, by one of 15 miles.

It is within the 100-fathom line which skirts the Macedonian coast, and is surrounded by depths of 40–60 fathoms, but on the south-east there are depths of 60–70 fathoms close in, rapidly deepening and sinking below 100 fathoms less than 2 miles out.

Roughly oval in shape, Samothráke has an extreme length (WNW.–ESE.) of about 14 miles, an extreme breadth (NNE.–SSW.) of $7\frac{1}{2}$ miles, and contains 70 sq. miles. The coast is fairly regular: there are few striking promontories, and, other than a few rocky coves, the indentations are flat exposed bights. The eastern parts have rocky coasts, and on the south-east the mountains fall with precipices into the sea. Elsewhere the coast-line is usually low, and the seaward projecting spurs are mostly fringed by narrow shingly strips.

Its mountain outline makes Samothráke one of the most striking islands of the Aegean. The main mass occupies the central part of the island and forms a ridge whose highest part is directed from north-west to south-east, but with the spurs and offshoots forming an immense amphitheatre open towards the south-west. The upper walls of this amphitheatre are formed by a bare craggy ridge, girt with precipices

both without and within, along whose crest the chief heights are ranged. Mount Phengári (or Sáos) at the east end of the semicircle, slightly raised above the crest, is 5,550 ft. (in Admiralty Chart 5,248 ft.) high—after the mountains of Euboea and Crete the highest point in the Aegean islands. On a lateral spur, about a mile south-west, is Mount Hágios Elías, and close north-west of Phengári is Mount Hágia Sophía, neither of them much lower than Mount Phengári. The central mass falls away first in precipices and then in a succession of rounded tumbled heights which run out south-east and east to the coast, but on the other sides subside into coastal lowlands. The eastern part is high, rugged, and hilly with steep and wild coasts; the western part is the lowest, containing some bold hills and ridges but sinking low farther west. The relief outline of Samothráke is characteristic and unmistakable, and the island is conspicuous far and wide. From the west its mountains appear as a bold swelling pyramidal mass whose apex, Mount Phengári, is generally wreathed in clouds. From the south and north it appears as a towering coffin-shaped mass, and as seen from Mytiléne it rises clear above Ténedos and Ímvros. The aspect from the south-east, where the mountains fall with huge precipices into the sea, is the most striking, and the effect is heightened by the bare greyness of the savage crowning cliffs and the dark gloomy colour of the whole island.

The only lowlands are those around the coast. The western end has the largest tract. Here the island runs out into a long spike pointing north-west, and this is low and backed by a fair-sized plain and low hilly slopes. Along the north coast the spurs from the central mountain mass, while protruding here and there to the coast, for the most part retreat leaving long stretches of rough sloping lowlands $\frac{1}{2}$ mile broad (north to south) with shingly beaches. The same is true of the south-west coast but to a less degree, for the lowland patches are here more broken and isolated by spurs. On both sides these coastal patches are backed by the steep ascents of the main ridge, and towards the east,

on both north and south, they cease altogether, the hills push out to the shore, and the whole district is rocky and high.

Samothráke is well provided with water. Numerous torrents furrow the sides of the mountain-ridge. Those on the north have mostly a constant flow and where they cross the lowlands have eaten out beds sometimes 40–50 ft. deep, with occasional waterfalls. Those on the south are more in the nature of mountain torrents, dry in summer. The large amphitheatre which is enclosed by the high central ridge is drained by one such, flowing to the south-west coast through a deep gorge between ridges. In winter all the streams of Samothráke have a violent rush of water. There are in addition numerous springs. These exist at many places around the coast near sea-level (e.g. near Palaioúpolis on the north-west and elsewhere frequently along the north coast), as well as on the hill-sides. The most notable is that called Sphidámi, on the flank of Mount Hágios Elías south of the gorge and amphitheatre mentioned. It has beautiful cold and clear water. In the low flat ground in the west are two salt lakes.

GEOLOGY

Samothráke is probably a fragment of a former chain of mountains composed mainly of primitive crystalline rocks. These rocks in Samothráke appear to have been partly overlaid with lava in volcanic eruptions, and a large part of the lava covering has been weathered off. The lower outer edges have also been covered with limestone and recent deposits. By far the greater part of the surface shows crystalline formations, some of them igneous. These are: granite stretching in a broad dome-shaped belt across the east part of the island from coast to coast; argillaceous schists covering a large tract about the centre of the island and a smaller one towards the south-east corner; and amphibolites occupying a large area in the north-west, east of the capital and Palaioúpolis. With these rocks is associated over a small area

serpentine. This is situated in the north at the north base of Mounts Hágia Sophía and Phengári, and in its neighbourhood are hot springs. The central schistose area has bands of primitive (metamorphic) limestone; the ridges and crags of the central heights are mainly built up of argillaceous schists and are extremely crumbly. Later volcanic formations appear mainly in the north-west and north, but the four highest peaks near the centre of the island (Mounts Phengári, Hágios Elías, Hágia Sophía, and Hágios Geórgios) consist of 'islands' of hard volcanic rock (trachyte) capping the schists. The largest area of volcanic rock is that of the tufas in the north-west, forming a broad belt stretching north-south, west of the capital. These tufas are blue-green or red-brown in colour and contain conglomerates. The escarpments in this area (e.g. west of the capital and above Palaioúpolis) are of the same grey or brown trachyte as the main mountain caps. Recent formations occur mainly in the west, south-west, and along the north coast. The hilly parts appear to be marine deposits, but along the north coast and about the lower course of most of the streams (north-east, east, south-west) are alluvial deposits.

The well-known hot springs of Samothráke are situated at the foot of rising ground on the east side of a clear and fair-sized stream which flows into the sea about midway along the north coast. Just about here the coastal plain ends, and to the east the hills abut on the sea. The rocks above (south) are prevailingly serpentine. The waters are strongly sulphurous, saline, green in colour, and leave a brown or green deposit. Their temperature is 140°-175° F. The air is pervaded with a strong smell of sulphur.

On the west flank of Mount Hágios Geórgios, in a region of amphibolitic schists, veins of quartz with pyrites and galena occur, and the volcanic tufa of the north-west contains in many places copper ore. Owing to the discouragement resulting from Turkish rule the mineral resources of the island have not been properly tested.

CLIMATE, FLORA, AND FAUNA

In its general features the climate resembles that of Thásos and other northern Aegean islands (see p. 16), but the presence of high land-masses makes it bleaker and damper. Snow lies deep upon the heights in winter, longer and over greater extents on the north side of the island than on the south. Mount Phengári is commonly girdled about its middle with a wreath of cloud even in a clear sky, and sometimes all its lower slopes are clear and its summit only embedded in clouds. Samothráke and the neighbouring waters are subject to violent and sudden storms of wind coming from almost all quarters and often rapidly shifting. These are extremely dangerous to mariners and partly account for the isolation of the island. Even more dangerous to sailing craft are the squalls which sweep down over the heights and strike the sea close in to the shore. In winter and spring these storms are often accompanied by heavy rain. The southern side of the island has in general a milder climate than the northern, but the north side is cooler in summer owing to the northerly breezes. (See also note on 'Climate', p. 177.)

As a whole Samothráke is bare, dark, and dreary-looking. Forests of oak (mainly perhaps the deciduous sessile oak) cover considerable tracts around the middle slopes of the mountains, and some of the trees are fair-sized. These groves are probably the relics of once extensive forests. Lower down towards the plains as well as towards the upper forest limits the trees become stunted and are succeeded by oak and juniper scrub. The lowlands of the north and the lower mountain-slopes are covered with a fragrant scrub of *arbutus*, myrtle, heather, forming often with the oak scrub higher up a tangled growth. Along the north shores *Agnus-castus* bushes grow, and plane-trees grow around springs, along the valley-beds, and in other damp places. The green of the plane-tree tops, embedded in the deep abrupt valleys which intersect the northern lowlands, is often the only indication at a distance of the presence of a stream-course.

Oleanders also grow along the torrent-beds, and ferns and wild flowers appear in spring, the latter forming an alpine zone above the oak woods and below the snow-line. The eastern part of the island is a bare stony wilderness with only scanty scrub.

Wild goats—probably of the same species as those existing on Eremómelos (see Part 1, p. 158) and Gioúra (Part 1, p. 219)—live in the wilds of the mountains. They have curving horns and are probably similar to those of Crete (see Part 3, p. 172). Snakes occur and various kinds of birds, but there appears to be no game.

HISTORY, ADMINISTRATION, AND INHABITANTS

Noted in ancient times as the seat of a mystery cult and much visited by devotees, Samothráke in other respects seems to have stood apart from the main currents of history. This was largely owing to its economic unimportance and the danger of its coasts and seas. In general its fortunes followed closely those of Thásos (see above, p. 18). Near Palaioúpolis in the north-west of the island there are striking ancient remains. Along with Thásos it passed in 1355 into the hands of the Gatelusio family, who erected several towers and fortifications and with whom it remained until it was taken by the Turks about 1460. Up till this time the island supported a fair-sized population, but many of the wealthy inhabitants were taken to Constantinople, and the young men and women were sold as slaves. The population, however, rose again by immigration and may have amounted to 8,000 in the early part of last century, and the island seems to have been on the whole little troubled by the Turks.

At the outbreak of the Greek War of Independence (1821) the Samothracians declared their independence, but after four months the Turks landed and almost exterminated them. About 400 refugees collected later on, but the population has never fully recovered. Owing to its poverty the island seems to have been left largely unmolested by pirates, but the capital, anciently on the north-west coast, is now

situated high up and inland. In more recent times Samothráke was a *kaza* of the Turkish *sanjak* of Lémnos and had a *mudir* and other minor Turkish officials resident. The inhabitants complained of oppressive taxes but seemed otherwise contented.

After the Balkan wars (1912–13) Samothráke was given with the consent of the Great Powers provisionally to Greece, but, as in the case of most of the other islands occupied by Greece in 1912 and since retained by her, no definite treaty confirms Greek possession. The island was constituted in 1914 part of the Greek province (*nomós*) of Lésvos (capital Mytiléne), though apparently administered for some time by a special commissioner.

The present population of Samothráke has been mostly recruited from other parts of insular and mainland Greece and has in consequence few insular peculiarities. But the shepherds who inhabit the eastern part appear to be descendants of the original island stock and still speak a dialect—peculiar both in its vocabulary and drawling intonation—which may be directly descended from the Samothracian dialect known in antiquity.

Of the characteristics of the islanders varying accounts are given. The climatic conditions would appear on the whole to be healthy except that in winter the storms and dampness are trying to the unacclimatized. Isolation, Turkish repression, and to some extent the rigours of the climate have discouraged industry, and the people are poorer, more backward, and cruder perhaps than in most Aegean isles, but they are reported to be fairly friendly. The Greeks, of whom practically the whole population is now composed, are Greek Orthodox Christians, formerly subject ecclesiastically to the archbishop of Maroneía, but now no doubt administered in this respect from Mytiléne through the bishop of Lémnos.

INDUSTRIES

Considering its mountainous character, Samothráke has a fair extent of cultivable soil, and agriculture has been the

chief occupation. The lowlands of the west, north, and south-west are fertile, the alluvial soil of the northern strip being reputedly as rich as can be found anywhere, and water is plentiful. Agriculture, however, has been discouraged by the historical and physical causes noted above; a state of apathy has hitherto reigned, and the people have been content to produce sufficient for their bare needs. This state of affairs may be altered under the Greek régime. The productive capacity of the island is shown by the numerous traces of cultivation in places now deserted.

The western part of the island is adapted for growing corn, and wheat, barley, and oat-fields, often surrounded by stone walls, are found here. Farther south-west are extensive olive groves with fine trees climbing the sheltered south-west slopes of the hills, mingling above with the wild oak scrub, and forming green patches around the stream-mouths. Tobacco does well in these western parts. In the northern coastal lowlands are traces of vine cultivation, besides northern fruits (apples, pears, plums, blackberries, &c.), but the whole of this rich and well-watered tract is abandoned to occasional grazing.

Pastoral pursuits are traditional. There is a breed of small ponies, besides mules, asses, and goats. These are mainly pastured in the upland scrubby parts and in the wild eastern portion of the island, and the shepherds, as noted above, are in many ways a distinct element in the population. The cream cheese (*miséthra*) of Samothráke is famed. In the forests charcoal-burners ply their trade, going daily long mountain journeys to and from the Chóra.

Bee-keeping is also a traditional pursuit. The hives are made of hollow logs, and the honey is well flavoured.

There is little regular seafaring owing to the inhospitality of the coast and seas. The island possesses a few caiques, in which the small export and import trade is carried. Small quantities of wood, charcoal, and fruit are exported, and the few necessary manufactured goods and colonial products are imported.

Samothráke was formerly, owing to its poverty, compelled to use a form of paper currency consisting of squares of cardboard, but this has probably been superseded by Greek money.

POPULATION AND SETTLEMENT

The population is about 4,000, practically all Greeks. Nearly the whole is concentrated in the capital village, Samothráke (Chóra), which is in the north-west part of the island. The village is picturesquely situated high up in a horseshoe-shaped curve or hollow of the mountain-slope beneath two conspicuous peaks of red and grey granite connected by a ridge which forms a crest above the town. On one side stands an ochre-coloured rock-mass crowned by a mediaeval castle. The heights above command a fine view of the island and the sea, and the site is well chosen for defence against piratical attack. The streets are extremely steep, and the tops of the lower houses sometimes serve as pathways for those above. The more recent houses are roofed with tiles, but the majority have flat clay-covered roofs. A church surmounts the village; the surroundings, like those of Samothráke generally, are dreary and bare. The people rely for mails upon irregular delivery by caique; there is a post office in the town.

At Kamariótissa on the east shore of the small curving bay formed by the low curving horn at the west end of the island are a custom-house, a few shops, storehouses, and houses. The water-supply is poor. This is the port of the capital, with which it is connected by a mule-path over rough hills (1½ hour).

Palaióúpolis on the coast below and north of the capital is the site of the ancient capital, but has now only two water-mills and a few stone huts. Midway along the north coast, at a place made conspicuous by white cliffs, are a few houses near the hot springs. This place is much frequented in summer by the islanders and by visitors from the Macedonian towns, but the accommodation is limited, and the people camp in tents.

HARBOURS AND COMMUNICATIONS

Violent winds and adverse currents make the waters around Samothráke dangerous even for steamships. The coast, which is destitute of good harbours, completes its isolation. There are only four or five points around the coast where landing is possible and then only in favourable weather. In stormy times the island is completely cut off. At Kamariótissa is a shingly beach suitable for caïques, and landing is difficult in both northerly and southerly winds. The other points on the north, south-west, and east coasts where landing is possible are open beaches and (except Palaioúpolis) are distant from the capital.

A Greek line of coasting steamers, plying between Piræus and Kavalla, had (1915) one vessel weekly calling outwards and inwards at Samothráke and connecting it with the above ports and with the adjacent islands. These boats, however, are often unable to call owing to the weather, and caïques are in common use.

There is no submarine telegraph line. The Greek Government had a wireless telegraph station on the east coast, but it is now dismantled. Communication inland is by rough track only, mules, ponies, and asses being available for transport.

ÍMVROS

PHYSICAL FEATURES

The island of Ímvros is the most easterly of the four northern Aegean islands, forming, with the smaller Ténedos to the south, a sort of advance guard for the entrance to the Dardanelles. From Samothráke on the NNW. it is separated by the deep sea-trough—here 15 miles wide—which runs north-east to form the gulf of Xéros. The southern rim of this trough is formed by the almost straight line—running north-east to south-west—of the north coasts of the Gallipoli peninsula, Ímvros, and Lémnos. This line is broken by two sea-gaps of 15 miles (between Cape Suvla and Ímvros) and 13 miles

(between Ímvros and Lémnos), but is clearly marked by the 100-fathom line which closely skirts the north coasts of these three land-masses and bridges the gaps between them. Ímvros is thus about equidistant from Samothráke on the NNW., the Gallipoli peninsula on the north-east and east, and from Lémnos on the south-west. From the mouth of the Dardanelles it is about 13 miles and from Ténedos 19 miles distant.

The sea-trough between Ímvros and Samothráke sinks to 350 fathoms, but the 100-fathom line skirts the north shore of Ímvros at a distance of about 2 miles. On all other sides (east, south, and west) the sea-intervals are shallower, with fairly uniform depths of 35–45 fathoms.

In its shape and structure Ímvros seems clearly to reveal itself as a detached fragment of the land-bridge represented on the east by the Gallipoli peninsula. With its opposite sides nearly parallel, the island forms a rough parallelogram with irregular promontories at its south-east and north-west corners. The extreme length (east to west) is 18 miles and breadth (north to south) $7\frac{1}{2}$ miles, but, neglecting the promontories mentioned, the main figure is about twice as long as it is broad (14 miles by 7 miles), the axis of length lying ENE.–WSW. The area is roughly 90 square miles.

The north coast is almost entirely rock-bound and backed by precipitous heights, even where these precipices do not fall sheer into the sea. On the east and west sides are fair stretches of low foreshore backed by steep rises, and the only considerable stretch of low coast-line is in the south-east on either side of the peninsula-neck. The south coast, though mostly low, is rocky-edged over a good part. There are no striking bays or indentations, and the coasts, considering their rocky character, are straight and closed except for the peninsula of Toúzla ('Salt-Pans'). This curves like a horn from the south-east corner of Ímvros 3 miles east, north-east, and north, terminating in Cape Kephaló and forming between itself and the coast of Ímvros to the west of it a broad shallow bay.

The island consists almost entirely of rather low but

strikingly sharp-featured hills. The main range lies in an irregular line along the north coast, in places hard upon it, at other places 2-3 miles inland. No general description can present adequately the tumbled and fantastic outlines of these hills, whose appearance is steepest and hardest from the north. A series of irregular bare blocks, with razor ridges, sharp pyramidal peaks, steep clean-cut descents and gorges, they lie piled one against the other along the coast, to which they fall with precipitous slopes. They are broken through at two places by valley-gorges, the largest and softest-featured being near the north-east corner. The heights in this chain average 1,500 ft., but 3 are higher: Mount Hágios Elías (Monovýzi, 1,959 ft.), a conspicuous pyramidal bare peak about central north in the island and 2 miles from the coast; the Hágios Demétrios ridge (1,880 ft.) north-east of the former and towering over the coast like a wall; and another bold pyramidal crest (1,643 ft.) in the north-east corner of the island (beyond the gap mentioned above). This latter from many quarters is as conspicuous and appears even higher than Mount Hágios Elías. South of this coastal range and parallel with it there runs almost throughout the length of the island (north-east to south-west) and slightly nearer the south coast a ridge composed of a series of sharp conical caps and razor edges, with steep sides furrowed by numerous ravines. The south-east corner of the island is occupied by scarped hill-blocks, scored by narrow deep valleys, and along towards the south-west is a gentler district of sloping-sided hills with humps and ridges mounting in places to over 1,000 ft. The appearance of the island is much gentler from the south than from the north, with softer slopes and more open coasts. The remarkable hardness and clearness of their outlines give the hills a clear-cut and smooth-sided appearance: this, however, is belied by closer contact; the mountain-sides are rocky and rough. The peninsula of Toúzla consisted originally of two islets, rocky, about 100 ft. high, and with cliffy sides. These have been joined by wind- and wave-driven sand and tied to Ímvros by a low sandy neck about

a mile broad (north to south), which encloses a salt lagoon rapidly silting up.

Level ground is scarce. The peninsula just described, both in its outer high part as well as about its sandy neck, is fairly level. The south coast has a good many coastal terraces, rising from 5–10 ft. near the sea to about 100 ft. at the foot of the hills behind, and at the mouths of the streams are small alluvial deltas. In the north-east there is a considerable valley, penetrating southwards from the gap in the coastal range (see above) for about $3\frac{1}{2}$ miles. It is fairly broad and enclosed on east, west, and south by steep bare mountains. Its mouth consists of two small semicircular bays, between which a rocky hill thrusts out north to form a promontory. The valley is drained by the Megapótamos. Linked with it by the gorge which this stream forms in its middle course, is an upland depression farther west. It is nearly as large as the valley, is enclosed between higher ridges, and has one or two gorges leading to the north coast. This latter hollow lies at the foot of Mount Hágios Elías. Farther inland, south-west from this, are other smaller hollows enclosed among rocky hills, and in the extreme west and south-west are other valleys, some fairly broad, opening on the coast. Many of the valleys have broad upper basins. The main watershed in the west part of the island is formed by the north coastal range; hence the valleys in this part are fairly long and trend to the south and south-west coast. With Mt. Hágios Elías the divide bends sharply south and is thence formed by the central ridge, running ENE. and then NE. to the north-east corner of the island. This sudden southward bend in the middle accounts for the relatively large lowland area in the north-east, drained by the only considerable stream—the Megapótamos—which has a constant flow.

Owing to the impervious nature of the rocks—either in their original form or decomposed—the drainage is largely superficial, and hence the island is mostly dry in summer. The deep and narrow valleys are generally waterless, and water is

obtained by sinking wells in them or in the alluvial deltas and shelving beaches. The south coastal region is best off in this respect, and apart from these wells, the Megapótamos, and occasional hill-side springs the island is arid.

GEOLOGY, CLIMATE, FLORA, AND FAUNA

Ímvros, like the neighbouring islands, probably has a foundation of crystalline formations (mica schists, amphibolites, &c.), but these seem hardly to appear on the surface except perhaps towards the south-west. The greater part of the surface is composed of volcanic rocks—mainly andesites and rhyolites, the latter interbedded with agglomerates, tufa, and ash. These are impermeable, and the andesite is largely decomposed into a purple clay. Practically all the conical and pyramidal crests, sharp ridges, and the steep escarped blocks (the latter in the south-east) are formed of hard volcanic rock. Interbedded with the volcanic rocks or deposited upon them are sedimentary formations. The former (consisting of conglomerates, sand, and pebble layers, as well as shales and red and green clays) lie in long stretches along the north and south flanks of the central volcanic ridge, steeply inclined. The latter (the deposited sedimentary rocks) are sandstones and clays forming a coastal fringe, mainly on the south and south-east (e.g. extremity of Toúzla peninsula). Alluvial deposits occur around the neck of that peninsula and in the Megapótamos and one or two other valleys and depressions.

A scientific survey of the island has yet to be made, and its mineral resources, if any, remain to be discovered. Lignite beds and green copper ores are reported.

The climate of Ímvros resembles in its general features that of the neighbouring islands, being an eastern Mediterranean climate with a hot dry summer and a mild winter with frequent rain-storms. But the neighbouring mainlands, particularly the mountains to the east, modify these general conditions. In summer a steady north-east wind prevails; it is dry and grows warmer as the season advances. It some-

times amounts to a gale. There are also in summer occasional south-west winds. In winter the following weather-cycle prevails. A south to south-west wind springs up, often bringing rain and sometimes a torrential downpour. This is succeeded by a calm for a day or less, and then follows a north to north-east wind, often rising to a gale, with a fall of temperature and frequently with rain. The onset of these squalls is sudden. Temperatures in winter may sink to 22° F. (10° of frost), but frosts are infrequent and of short duration. There are occasional blizzards but little snow. In summer the temperatures may rise to over 90° F. The mean annual rainfall is 23-24 inches. The fall is mainly in the late winter and early spring. The only summer rains seem to be the accompaniment of thunderstorms. To the scanty rainfall and great and continuous summer heat as well as to the imperviousness of the rocks are due the scanty vegetation and the dry stream-beds of the island. (See also note on 'Climate', p. 177.)

The natural vegetation is scanty, consisting mainly of scrub. There is hardly anywhere a continuous covering of soil on the hill-slopes, and bare rock predominates. The island has thus a bare and arid appearance, and much of the vegetation is hid in the hollows. Particularly barren and monotonous are the south slopes of the scarped block-district of the south and south-east, which is exposed and lacks springs. Here the hills are almost entirely covered with a thorn bush (*Poterium spinosum*), whose yellow spines and tiny dark-green leaves give a prevailing khaki tint to the whole region. The more sheltered and moister inland basins and valleys of the centre and north have a much richer scrub with tints of varied green. The dominant shrubs are juniper, arbutus, heaths, prickly oak, wild olive, and a privet, nearly all evergreens. In the hollows this scrub may be 5-8 ft. high, but as it approaches the wind-swept crests it becomes a crawling ground-growth. Here and there in the island are groups of more or less stunted deciduous sessile oaks, found in sheltered spots up to 1,000 ft. and over. In addition on the valley-sides are holm-

oaks, growing as isolated trees to about 30 ft. in height. Both these varieties of trees are perhaps the relics of once extensive forests, the reappearance of which is mainly prevented by goats. The stream-beds are everywhere accompanied by oleanders; in the valley-bottoms brambles and bracken grow, and in spring the hill-sides, even in the more barren parts, are transitorily bright with turf and small flowers. All the trees—except those in the most sheltered areas—are bent towards the south or south-west, indicating the direction of the prevailing wind. •

More important than the natural vegetation are the cultivated trees. These are dealt with below; but it may be mentioned here that the bulk of the streams, even fairly high up in the hills, are lined with fine Lombardy poplars and willows, and fig-trees are found growing wild in many places high in the hills.

There are few wild animals: hares and squirrels are the chief. Besides smaller reptiles there is a ringed snake which attains a length of 4 ft. Of birds eagles, buzzards, ravens, crows, owls, hawks, red-legged partridges, and some smaller birds seem to be indigenous and numerous. In addition numbers of smaller birds inhabit the island in summer, other birds (among them wild geese and teal) in winter, and many varieties touch on the island in passing northwards or southwards. Insect pests are ants, flies, centipedes, large moths, large grasshoppers—all numerous. There are few mosquitoes.

HISTORY, ADMINISTRATION, AND INHABITANTS

Ímvros, like Samothráke, was noted anciently for a mystery worship, but rose to importance only after its conquest by Athens. With the latter state it was closely connected, and was colonized by and provided mercenaries for her. Its later history is obscure, but in general it shared the fortunes of the other northern Aegean islands and was for a century under the domination of the Gatalusio family and then of the Turks. Under the latter it was, in more recent times, a *kaza* of the *sanjak* of Lémnos, was administered

by a *kaimmakam*, and seems to have been little troubled by its rulers. The islanders seem to have lived in the same fear of piratical descents as did the Thasians and Samothracians. During the Balkan wars it was captured (1913) by the Greeks, and at the end of those wars the Great Powers adjudged it, along with Ténedos, to Turkey. The importance of these islands for the defence of the Dardanelles was the chief factor determining that decision. In spite of this, however, Greece retained possession of the island on the ground that Turkey had not formally acquiesced in the cession of Chíos and Mytiléné to Greece. No treaty has as yet defined the status of Ímvros, which in 1914 was constituted a subdivision of the *nomós* of Lésvos (capital Mytiléné), though it appears to have been administered provisionally by a special commissioner. A Greek bishop is resident. During the war Ímvros has been of great use to the Allies as a base for aerial operations against the Dardanelles and Constantinople.

The people speak Greek and regard themselves as Greeks. Anthropologically they appear to be of mixed race, blonde and dark in about equal proportions and with traces, in the dark men, of wide faces and the Mongolian eye. There are few, if any, real Turks left, and the religion is that of the Greek Orthodox Church. The prevailing costume is still the distinctive island garb—skull cap, coloured shirt, braided jacket, a kind of cummerbund, baggy trousers, thick woollen stockings, and goatskin shoes. There is a tendency, especially amongst the younger men, to European style of dress. The women are secluded in oriental fashion—except during harvest, when they help in the fields—and wear a modified form of Turkish veil. The fare is simple: heavy brown bread, goat's milk, cheese, olives and olive-oil, beans and green vegetables, and occasionally meat. Poultry and game (hares and partridges) supplement the larder. Home-made wine is drunk sparingly. Charcoal is made by burning scrub. The houses are small, low, of undressed stone and mud, and roofed with red tiles. There are few windows, but there is a porch,

which serves as a storehouse for wood and grain. The houses are built to resist wind. In the villages are two-storied houses and churches. The people are simple in their tastes, industrious, fond of home and their island, not without an eye to natural beauty, and peaceable.

INDUSTRIES

These are at present almost entirely agricultural and pastoral, with a little fishing. Cultivable land in ÍmvrOS consists of the wide alluvial fans or stream-deltas (mostly along the south coast) and the broad lower valleys, notably of the Megapótamos in the north-east. Here the soil is deep, rich, and fairly moist. In this connexion should be mentioned the peninsula of Toúzla, which, though rather dry and rocky, can be cultivated both towards its extremity and near its neck. There are also the valleys, some of them no more than narrow V-shaped ravines with streams or ground-water. These have rich soil in the bottom but are otherwise uncultivable owing to the steepness of the sides. Others are hill-side gullies with a head-spring and running stream. These can be cultivated by terracing both sides. Lastly there are the upper valley basins, where there are a fair water-supply and a good deal of earth. Such are the inland basins of the north and centre, and they are important.

In general this space is well utilized, though there is still room for more population. The larger valleys and basins are closely occupied: the little plots, fields, terraces, and homesteads crowd high up the gullies and ravines, marked by the invariable poplars and willows and often beset with stone walls crowned with thorns as a protection against cattle. From a mountain-top in the centre ÍmvrOS appears a smiling and fertile island, and its external appearance of barrenness is largely deceptive. The methods of cultivation are primitive, and the chief difficulty of retaining soil and water on slopes could be overcome by more scientific methods. The peasant, though comfortable, is not rich and leads a laborious existence.

Olives grow well on the lowlands and the sheltered valley-slopes to 900 ft. and upwards, all over the island ; between the trees grain crops are usually grown. Grain (wheat, barley, maize) is an important product. It is grown almost everywhere but in the Megapóttamos valley ; the coastal terraces and the inner upland basins are the chief sites. Ploughing is done with two oxen and primitive wooden ploughs, and in places where this cannot be used a mattock is the only implement. Sowing begins with the rains in November and continues till January ; the harvest is at the end of July. The corn is threshed, as in Crete, on large stone-paved circular threshing-floors, being trodden out by asses or ponies. The corn is ground mostly in windmills, which are round, built of stone, and conical-capped with 10-24 triangular sails. Such may be seen in the two gaps east of the capital (where they catch the north-east wind) as in most villages facing the sea. Water-mills are scarce owing to the lack of running water, but they exist in the larger basins. Another important product is beans, grown generally where grain is. Fields are commonly left fallow, and no artificial manures are used. Maize is grown chiefly in the valley-bottoms or between olives, and it is probable that tobacco also would grow well in the valleys. Vineyards of wine and currant grapes thrive on the alluvial terraces and up sheltered valleys to 700 ft. The wine is harsh but could probably be improved. Fruit is grown around the houses. The fig-trees attain large dimensions and grow wild on the hills.

There are usually no divisions between the fields, except sometimes ditches ; but in the valleys the terraces and transverse stone walls with thorn crests make movement difficult and often impossible. A fair amount of the land belongs to the Mount Athos monasteries and is worked by them as *metóchi*.

Besides the oxen, ponies, and asses used in agricultural work considerable herds of goats and some sheep pasture on the scrubby hills. Most villages have their flocks of these animals ; bees and poultry are also kept. From goat's milk cheese is made.

There are fishing villages round the coast, but owing to the storminess of the seas and the lack of harbours maritime pursuits are not important.

In 1875 a concession to mine some lignite beds was granted to a British company, with what result is unknown. (For possible mineral deposits see p. 42.)

No statistics are available to show the production and trade of Ímvros, but it may be assumed that the island, in view of the simple life and tastes of the inhabitants, is largely self-supporting, and that beyond perhaps some oil, corn, fruit, a few cattle, and some cheese there are no exports and few imports other than manufactured and colonial goods in small quantities. Such trade as exists is done mainly through the capital, Kástro, and by means of sailing craft.

POPULATION, SETTLEMENT, HARBOURS, AND COMMUNICATIONS

The island contains some 8,100 people, practically all Greeks. These are distributed fairly well over the cultivable ground in the island. The only town is the capital, Kástro, which is situated at the mouth of the Megapótamos valley on the north-east coast. Here a broad rocky hill thrusts out with steep cliffs into the sea, forming two small sandy bays on the east and west. It is connected with the island southwards by a broad sloping neck. On this neck the town is built, not visible from the sea to the north and sheltered from the northerly gales by the hill behind. Close under the western flank of the rocky height the stream, dammed farther west by a high pebbly beach, breaks through to the sea. On east and west of the valley rise high steep mountains, and the town is dominated by a ruined mediaeval fortress. The town is not large or specially remarkable but contains some fair-sized buildings, churches, storehouses, custom-house, a post and probably a telegraph office. The Megapótamos valley contains several other hamlets, mostly scattered round the edges of the cultivable space. Of these Glyké, Panagiá (formerly, on account of its safe inland position,

the capital and seat of a bishop of the Greek Orthodox Church), and Theódoro may be mentioned. Other villages are Agrídia in an upper basin on the south slope of the coastal range and Schinoúdi in a central western basin, connected with its *skála*, Pýrgos, and agricultural ground by a valley opening on the south-west coast. There are other villages equally important, and the whole island is dotted in its valleys and cultivable parts with single houses and hamlets, the latter collections of homesteads usually without streets or any definite plan, only the larger ones having churches and signs of communal life. They are mostly composed of single-storied red-roofed houses, and have an attractive appearance, especially when surrounded by green olives, vines, &c. Almost all are built on elevated sites—slopes or hill-crests—where they command a view and some security, economize cultivable ground, and lie conveniently between their fields below and their pasture-grounds above. Also the heights are healthier than the valleys.

There are no good harbours: the small bays round the coast are exposed to winds from one direction or another, and offer only limited room and temporary shelter. The winds shift suddenly and are often violent. Ímvrov thus suffers much from its lack of coastal accommodation. The best anchorage is in the sandy bay west of Kepháló point in 10–16 fathoms, but it is exposed to north-east and southerly winds.

A Greek line of coasting steamers maintained (1915) a weekly service between Piræus and Kavalla, touching at Ímvrov (Kástro) outwards and inwards and connecting it also with the neighbouring islands. These boats carried mails. Sailing craft are also much used.

There was a submarine telegraph line (laid 1906) connecting Ímvrov with Seddul Bahr (Dardanelles). It was a Turkish line and may have been cut during the war. There is also submarine telephonic connexion with Lémnos.

There are no roads, and the tracks are mostly over rough and steep hills. In the Megapótamos valley and along the

south coast communications are easiest, and in the former the stream is bridged in one or two places. Ponies and asses are available for transport.

TÉNEDOS

(WITH MÁVRO ISLES)

PHYSICAL FEATURES, GEOLOGY, &C.

The small island of Ténedos belongs more closely to the Asiatic mainland (the Troad) than any of the islands of this group so far described. From the nearest point of that mainland, Cape Yukyeri, it is distant only 3 miles. From the entrance to the Dardanelles it lies 12–13 miles, while from the nearest islands of the North Aegean group, Ímvros and Lémnos, it is separated by stretches of open water about 19 miles and 30 miles wide respectively.

Ténedos, like Ímvros and Lémnos, lies completely within the 100-fathom line, and in fact it lies within the 20-fathom line which in this part borders the western coast of Asia Minor. Between Ténedos and the two islands named the channels sink to over 40 fathoms, but for distances ranging from 1 mile on the south to 2–3 miles on the west and north there is no water deeper than 20 fathoms around the island, and the channel between it and the mainland has depths of 6–13 fathoms. Except at its northern end, where a broken series of rocks and shoals, together with an islet, stretches westwards from Cape Yukyeri to within about $1\frac{1}{2}$ mile of the north-east coast of Ténedos, this channel is clear and continues clear northwards—flanked about midway by the Mávro islets (see below) on the west—to the entrance to the Dardanelles. It is the existence of this channel, convenient for coastwise traffic to and from the Black Sea, together with the position of the island commanding the entrance to the straits, that constitutes the strategic importance of Ténedos.

Roughly triangular in shape, with a blunted apex pointing west and a base about $3\frac{1}{2}$ miles broad (north to south) facing

east, the island has an extreme length (west to east) of 7 miles, an extreme breadth (in the east) of 4 miles, and an area of about 13 square miles. The form is comparatively regular and the coasts closed, there being nothing more than rocky coves on the south-east and east and one small roundish bight facing south near the west end. The coasts are in the main backed by steep heights and are in places cliffy, though nowhere very high. In places these cliffs stand back from the shore (e.g. on the north) and admit low beaches. These latter are numerous: nearly the whole of the north coast has a low foreshore; there are considerable stretches of sand in the southern bays, and the east coast has similar beaches. Except on the south-east the coasts are skirted by a belt of shallow water ($\frac{1}{2}$ to $2\frac{1}{2}$ fathoms) in places only 100 to 200 yds. wide, in others (e.g. on the north-west) reaching out nearly a mile. There are also off-lying reefs and rocks.

The island is occupied by hills, highest and boldest in the north-east, though along the south-east and south they overhang the coast more steeply. There is no very definite grouping, though the hills which fill the north-east corner seem to be both in composition and placing a distinct group. Here are Mount Hágios Elías (625 ft.) and, adjoining it on the ESE., Mount Sána (385 ft.) overlooking the capital and its harbour. The former of these two is the highest point in the island and is round and dome-shaped, and Mount Sána also has a blunted outline. The other hills are much lower, with soft and rolling contours, and seem to follow the south coast in an irregular chain, sinking gradually lower towards the western extremity. The island as a whole is inconspicuous from a distance, but Mount Hágios Elías stands out when seen from the west. The valleys between these hills are mostly soft-sloped; the largest run south-east and north-west respectively from the north-eastern heights mentioned above and form a fairly broad and clear depression separating that mass from the other hills of the island. These hollows are drained by small streams emptying into bays on the east and north coast respectively, and besides these there are only short

torrents furrowing the southern hill-faces. Few of these streamlets reach the sea, forming marshy patches before they soak through the coast sands. The water-supply appears to be sufficient and wells plentiful.

The north-eastern and most massive section of the Ténedos hills is composed of volcanic rocks (andesite and trachyte), which explains their hard and bold form. The south-eastern corner of the island is occupied mainly by limestone interbedded with schistose rocks (argillaceous schists, greywacke, &c.), while practically all the rest of the island (i. e. the western half) is composed of late marine Tertiary formations. No minerals are reported.

The climate (of which detailed information is lacking) resembles that of the neighbouring mainlands, and the island is said to suffer from the cold north winds from Thrace. (See also note on 'Climate', p. 177.)

The hills are bare; there is little natural vegetation beyond scrub and no wild animals except perhaps some game. From the sea the island has a barren and rather desolate appearance.

HISTORY AND INHABITANTS

Its position close to the mouth of the Dardanelles gives Ténedos a strategic importance out of keeping with its size and intrinsic value. Moreover most vessels, whether bound to or from the Dardanelles, find it convenient to take the passage east of the island, and this strait is therefore nearly always crowded with sail. These factors—the insignificance of the island itself and its commanding position—explain both the obscurity of the island's history and its importance in the eyes of powers wishing to control the Aegean-Black Sea trade, and what importance the island lost for navigation by the advent of steam it made up by the introduction of modern defences and long-range guns.

Ténedos appears to have passed through the usual cycle of hands—Athenian, Roman, Byzantine, Genoese—and finally to have become Turkish property. Under the Turks it was

latterly a *kaza* of the *sanjak* of Lémnos, and a site near the capital was strongly fortified and garrisoned with two companies and formed one of the forward defences of the Dardanelles. During the Balkan wars the island was taken by the Greeks, but the settlement of the Great Powers, presented in a note at Athens in 1914, excepted Ténedos (along with Ímvros, Kastellórizo, and the Dodecanese) from the number of the islands given conditionally to Greece—Ímvros and Ténedos being judged an integral part of the Turkish defences of the Dardanelles. Nevertheless the island continued to be occupied by the Greeks and forms provisionally part of the province (*nomós*) of Lésvos (capital Mytiléne).

The people are mainly Greek, though there appears to have been a larger proportion of Moslems than in islands less under Turkish influence. It is said that the agriculturists are practically all Christians.

INDUSTRY, POPULATION, &c.

The resources of the island are limited : agriculture is the chief industry. The chief areas of cultivation are the larger valleys of the north-east, particularly the broad northward-facing valley. Here, as in other suitable sites, vines grow well and produce the wine which is the chief island product. It is a red wine of good quality, rich in alcohol, and has a wide reputation in the Levant. Raisin-vines (*sultanas*) are also largely grown. Very little corn is produced, and except for a few gardens and fruit-trees the island is devoid of trees. Cotton, pulse, and vegetables are probably grown in small quantities, but there are few, if any, olives.

As practically all the wine, wine products, and raisins are exported the figures given below for trade give a fair idea of the agricultural production, these figures being based on a series of returns covering the 8 years 1904–11. It will be noticed that there are considerable fluctuations in output, due to vine disease, bad seasons, markets, &c.

The value of the total trade of Ténedos remains fairly constant at £27,000–£28,000 per annum (it reached £30,500 in 1907

and sank to £24,200 in 1906). Of this about £19,000 are imports and £8,000–£9,000 exports. The chief exports are : wine, fluctuating in quantity and quality (340,000 gall. in 1907 ; 155,000 gall. in 1911), with an average value of £5,800 yearly ; raisins (sultanas), 300–800 tons, valued at (average) about £1,000. Other exports, mainly vinegar and spirits, amount in value to about £1,500 per annum. About six-sevenths of these exports before the war went to Turkey (Smyrna, Constantinople, &c.), the remainder to Roumanian (Black Sea) ports and formerly to Egypt. Imports are : wheat, 200–350 tons, valued at £2,500–£3,000 ; flour (increasing), over 300 tons, £3,400 ; olive-oil, wood, manufactured goods (chiefly textiles), colonial wares (tea, coffee, sugar, &c.), amounting together to £13,000–£14,000. Practically the whole of these imports prior to the war came via Turkish ports, though the manufactured goods came originally from western Europe. In future they will no doubt be shown as from Greece.

A British vice-consul resides in Ténedos.

The population was given (1912) at 6,600, of whom about 1,200 were Moslems. The number of the latter—who probably included the Turkish garrison and officials—has no doubt since then considerably declined. There is also a good deal of emigration, mainly to America. The greater part of this population is contained in the capital, Ténedos (pop. about 4,000, P. T. O., C. H.), situated on the coast near the north-east corner of the island at the foot of Mount Sána and partly in a hollow between it and the neighbouring hills on the south. The northern part of the town lies behind a hilly promontory, which is crowned and girdled seawards by a massive battle-mented Genoese castle and a Turkish fort, and between this promontory and the foot of Mount Sána. It is therefore not visible from the east, but the southern part surrounds the small bay to the south of the promontory. The site chosen is on the best bay and on the most sheltered side of the island, commands the strait, and is within easy reach of the mainland. The town itself is insignificant in appearance, with houses mainly wooden and surrounded by gardens. On the hill-

slopes to north and south are windmills of the squat round type usual in these islands. The other habitations are chiefly scattered peasants' huts in the midst of the vineyards.

HARBOURS AND COMMUNICATIONS

There is only one harbour, that of the capital. The small semicircular bay south of the promontory above mentioned has been further sheltered from the north by a mole projecting 200 yds. eastwards from the head of the promontory. The water within ranges from 6 fathoms near the entrance to 1 or $\frac{1}{2}$ near the head, a distance of about 300 yds. In 1910 money (£1,500) was allotted by the Turkish Government for the repair of this mole, but little or nothing was done. The accommodation is therefore limited. Large vessels have to anchor $\frac{1}{2}$ mile east of the mole-head, in about 9 fathoms, but this anchorage, though sheltered from other points, is exposed to the north and north-east (i.e. to the prevailing winds). Owing therefore to the current in the strait (setting generally southwards) and to sudden changes of wind the situation is poor. The other bays on the coast are small and mostly exposed, though there is a fair anchorage under the south-west coast (about $1\frac{1}{2}$ mile north-west of the most southerly point), where there are good holding-ground and a good landing-place.

Before the war a line of Greek coasting steamers, plying between Piraeus and Kavalla, used to call weekly, outwards and inwards, at Ténedos harbour, bringing mails. These boats connected the island also with the neighbouring islands. Austrian Lloyd boats used also to call fortnightly—plying between Salonica, Smyrna, &c.—and another line is said to have called occasionally.

Four cables, all the property of the Eastern Telegraph Company, connect Ténedos respectively with Chanak, the opposite Asiatic coast at Bashika bay (both for Constantinople), Lémnos (for Salonica), and Chíos. The first-mentioned was out of repair and useless in 1908, and the second is probably also cut.

Inland there are only the usual island tracks.

MÁVRO ISLES

These islets, called Rabbit Islands on the Admiralty Charts, are a group consisting of one larger and three smaller islets surrounded by rocks and shoals. The largest, Mávro ('Black') Isle, lies about 6 miles north of the eastern part of Ténedos and 3-4 miles from the Asia Minor coast, and helps to form the sea-channel leading south from the Dardanelles and between Ténedos and the Troad. The largest isle is irregularly triangular (sharp towards the east) and is hilly, mounting to 138 ft. at its western end. Its western and south-eastern shores are faced with cliffs. The surrounding water is shoal, and large shoals extend northwards and south-westwards for nearly a mile. The islet appears to be of Tertiary formation and to be cultivable. There is a convenient landing-place on the south-west, with good water, a farm, and a chapel on the north-east. The other islets (one $\frac{1}{2}$ mile to the south-west of Mávro, the other two about 1 mile SSE.) are mere rocks. Between the two latter and Mávro is a channel with depths of 7-15 fathoms, where vessels can find safe anchorage in northerly gales. The group, which has some importance as commanding the entrance to the Dardanelles, is occupied by Greece.

LÉMNOS

(WITH HAGIOSTRÁTE)

PHYSICAL FEATURES

The north coast-lines of the peninsulas of Gallipoli and Áthos if produced would meet at an obtuse angle about the centre of Lémnos, and this island thus appears to form the keystone of an inverted arch which may once have formed a land-bridge between Chalcidice on the west and the Thracian Chersonnese (Gallipoli peninsula) on the east. From the former (Mount Áthos on the north-west) it is separated by a passage of $35\frac{1}{2}$ miles; from Cape Helles, the south-west extremity of Gallipoli, by one of $37\frac{1}{2}$ miles. While, however, the strait between Lémnos and Áthos is clear and deep, on

the east Lémnos appears to be more directly connected with Ímvros (13 miles) and through it with the Gallipoli peninsula. Standing about the middle of the northern Aegean, the island has an important strategic position and commands on the east the Dardanelles (38 miles) and on the west the routes to Salonica and to the Thracian coast and Kavalla.

The 100-fathom line which runs south-west from the north coast of Gallipoli (see Ímvros, p. 39) skirts the north shore of Lémnos at a distance of 5-6 miles and, rounding Cape Mourtzeplós (the north-west corner of the island) close in, bends south and withdraws to about 9 miles from the west coast. The sound between Lémnos and Áthos sinks to over 500 fathoms, but on the south and east of the island there are depths of 30-70 fathoms. The north-east coast is fronted by a strip of reefs, shallows, and sand-banks, stretching out eastwards for about 11 miles opposite the great salt lagoon, with depths of $1\frac{1}{2}$ -8 fathoms. The strait between Lémnos and Ímvros has depths of 30-40 fathoms.

Lémnos has a roughly oblong outline, which is, however, marked by great irregularities. The extreme length (from Cape Mourtzeplós eastwards) is $21\frac{1}{2}$ miles and the extreme breadth (north to south) about 14 miles. The island is longer and broader in the north and east respectively, but measures on an average 16 by 12 miles, and has an area of about 180 square miles.

The coasts are almost everywhere penetrated by bays ranging in size from large gulfs to tiny coves, the larger frequently containing the smaller. These bays and coves are countless and help to form innumerable promontories, fantastic in outline, and generally with narrow necks and rocky terminal knolls. The two largest inlets are Móúdrov bay on the south and Pourniá bay on the north, the heads of which approach to within 3 miles of each other a little east of the middle of the island and nearly divide it in two. Móúdrov bay is an inlet shaped like a bent arm running inland from near the south-east corner of Lémnos for about $4\frac{1}{2}$ miles north-west and then 3-4 miles NNE. It is over

3 miles wide at its entrance, $2\frac{1}{2}$ miles wide on an average, has numerous curiously shaped side-bays, inlets, and promontories, and near the top a roundish basin. The land on either side of the entrance is high and rocky, and the surrounding country in general is hilly, though towards the head are plains. Close west of Moúdro's bay is the gulf of Kondiá, a ragged-edged strip about $2\frac{1}{2}$ miles long and about $\frac{3}{4}$ mile broad. It runs NNE., and its head, curving east, draws to within $\frac{1}{2}$ mile of the south-west coast of Moúdro's bay, forming with the latter the large peninsula of Phakós. Farther west are several fair-sized roundish bays, and along the west coast is a succession of irregular but fairly deep bights, chief of which are: Platý bay just north of Cape Tegáni ('Frying-Pan'), the extreme south-west point of the island; the two bays north and south of the fortified peninsula of Kástro; and the larger and more open Káspaka bight farther north. The north-west coasts are the straightest and most closed, though the north-west corner of the island is formed by a striking oblong peninsula with a very narrow neck. On the north, besides one or two smaller openings to the east and west of it, there is Pourniá bay. This is nearly 7 miles wide between its entrance bluffs and narrows in an irregular triangular shape to its head $4\frac{1}{2}$ miles south of this. The sides are deeply indented with grotesque bays and headlands, and the head is an oval and almost land-locked basin. On the east side is the nearly circular Hekatonkephaláís ('Hundred-Head') bay, itself with a circular branch on the south.

The coasts of Lémnos are prevaillingly rocky, the western half of the island having as a whole a higher and steeper coast-line than the eastern. Along the south (on either side of the entrance to Moúdro's bay) and around the north-west corner of the island are continuous stretches of cliff. The other parts consist mostly of the countless headlands, whose bluffs usually fall in steep cliffs all round, separated by bays with lower shores and sandy or shingly beaches. The only considerable extent of sandy coast is along the east, especially in

the neighbourhood of the shoals mentioned above, and the two large inlets of Mouódros and Pourniá have in parts low inner shores. In the eastern half of the island a good deal of sanding-up seems to be going on, and the more enclosed bays in this part show a tendency to become lagoons (see below).

The interior of Lémnos is hilly and in parts might be termed mountainous, but it presents no such striking outline as the lofty pile of Samothráke or even as the lower but rugged Ímvros. From a distance Lémnos has the appearance of a flattish uneven plateau, and it is only on closer view—from about 10 miles or less—that its features begin to show distinctive forms.

The western half of the island is on the whole higher than the eastern, and nearly all the greatest heights lie within 4 miles of the west coast. The grouping of the hills is extremely irregular, and there are hardly any well-marked ranges or systems. On the other hand, owing mainly to the geological formation, in the various parts of the island are regions with fairly clear and distinct characteristics. Thus in the south-west is a region where from the general flattish surface protrudes abruptly a forest of peaks of volcanic rock, with sharp, hard, and often fantastic outlines, steep and often precipitous smooth slopes, and of dark violet hue. Most striking of these are: Mount Hágios Elías (Therma on Admiralty Charts) 1,130 ft. high, conspicuous from the west and north by reason of its sharp conical summit cleft across by a sharp smooth-sided chasm with precipitous walls; Mount Hágios Pávlos (1,050 ft.), 3-4 miles south-west of the former, with a sharp bristly crest or spine; and Mount Phakós (1,106 ft.) forming a bold and rugged rampart along the south coast of its peninsula and dominating the entrance to Mouódros bay on the east and Kondiá bay on the west. Besides these there are in this region innumerable smaller peaks and reefs of the same character, often isolated and forming along the coast (e.g. the Stiví mass forming the Tegáni peninsula) the countless fantastic promontories mentioned

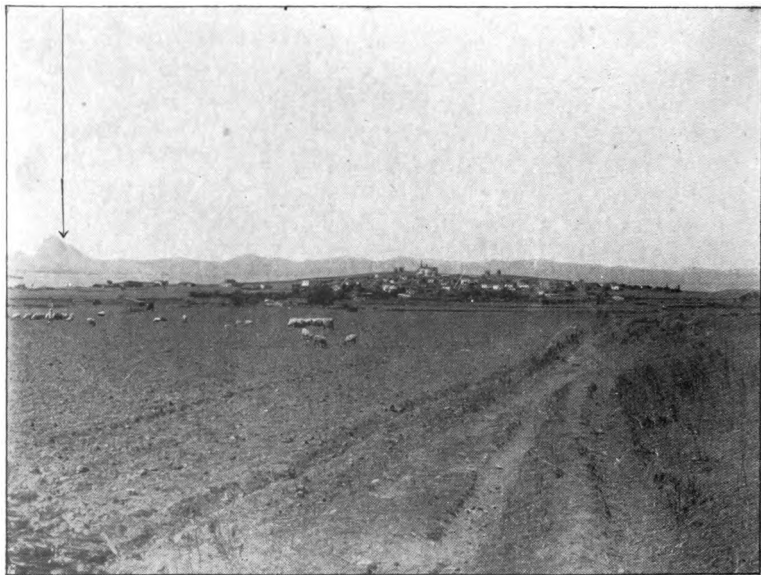
above. Between these hills lie small interrupted valleys with cultivable bottoms and sides, which generally open on the coast bays (e.g. the valleys of Tothános and Kondiá). Opposite Káspaka bay, near the middle of the west coast, is the dominating flattish-topped double peak of Mount Athanási (1,085 ft.), also volcanic and clear-cut. The north-western region is less clearly marked. It consists of a highland of an average elevation of 800–1,000 ft., composed of a series of irregular plateaus, diversified by occasional peaks and rendered rugged and confused by numerous ravines. The outstanding heights are few: chief is Mount Skopiá (1,410 ft.) near the north-west corner, the highest but not the most striking elevation in Lémnos; there is a height of volcanic formation of 1,122 ft. near the village of Svérdia, and others of about 1,000 ft. The ravines in this part are caused by erosion in softish rocks, and they are deep, tangled, steep, and often precipice-lined; their tortuous torrent-beds open on the north and west coasts. The western mountainous part of Lémnos sinks towards the east—abruptly on the north, unevenly in the south—and passes over into the hill-country and plain bordering the north-west and north shores of Moúdrov bay; but broken hilly country skirting the north coast (Pourniá bay) links the western with the eastern hills.

The eastern half of Lémnos is much less picturesque and more monotonous than the western. The reddish-yellow hills have soft undulating forms and flattened summits; they are for the most part low (200–300 ft.), and towards the south, where they rise in Mount Parádis to over 800 ft., their forms, though rough, are much less bold and rugged than the corresponding heights on the west of Moúdrov bay. Eastwards from Moúdrov village stretches a range of volcanic hills similar to those of the west but much less pronounced. There are in this part numerous flattish lowlands, often marshy; but the southern and northern extremes are hilly and present bold and often cliff-bound coast-lines (cf. Cape Pláka on the north-east, an undulating tongue of land 200–300 ft. high, ending in vertical cliffs).

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PLATE I

Mount Therma.



*Village of Mudros taken from the S.E. from the track
leading to the S.E. end of the island.*

Distance about 1 mile.

Ordnance Survey, March, 1919.

(To face p. 61)

The chief plains lie around the head of Moúdro's bay. The largest, stretching northwards from the head of the bay, is nearly flat; it is marshy near the coast and intersected by a fair-sized stream-course. Other plains stretch north-east from the bay, with hilly interruptions, and skirt the north-east coast. In the lowest part of the largest of these, opposite the great shoals off the east coast, is a large salt marsh, dry in summer. Fair-sized also are the hollows stretching northwards from the head of Kondiá bay, and north-eastwards from Kástro bay; but, whereas the hollows in the east, even when isolated (e.g. that of Psín in the extreme south-east), are easily accessible one from another, the western valleys are mostly shut in by high rocky ridges and crests. Further the eastern hollows are mostly light-soiled and even sandy (e.g. that of Psín).

There are no large streams; all dry up in summer either completely or to a series of water-holes, and even the marshes do the same. The stream-courses of the western part are the dry rocky torrent-beds, often winding through deep and precipitous ravines, common in Greek lands. The streams of the east have eaten out vertical-sided narrow courses (15–25 ft. deep) through the soft plains, and towards their mouths, though the banks sink, they lose themselves in sand. The sharp scarps caused by the erosion of these streams sometimes relieve the monotony of the undulating eastern hills. There are plenty of springs in the valleys and on the hill-slopes, and in spite of its arid appearance the island is not badly off for water, there being enough for human use and usually for agricultural purposes also. Nearly every village has 2 or 3 wells except those around Moúdro's, which suffer at times in summer. The water lies near the surface (6–8 ft. deep) in the flats, but in the hills the wells are deeper (24–30 ft.).

GEOLOGY, CLIMATE, FLORA, AND FAUNA

Two-thirds of Lémnos—by far the greater part of the north and east—is composed of sedimentary rocks (sandstone,

greywacke, conglomerates, and schists, but practically no limestone), mostly of a dark-brown or greenish colour and containing many traces of carbonized vegetation. In these formations lie those deep steep-sided valleys of erosion which are seen in most characteristic form in the north and north-west, but which are also found in the south-east corner of the island. Volcanic rocks form the greater part of the south-western corner, the upper half of Phakós peninsula, a belt of hills stretching across the south-east peninsula south of Moúdrov village, besides fair-sized areas NE. and NNW. of Moúdrov bay. These rocks are of Tertiary formation (dacites, trachyandesites, &c.), are extremely hard, dark violet or black in colour, and form a series of dikes, reefs, and massive sharp-pointed angular and distorted masses projecting abruptly from the sedimentary formations which surround them. The most characteristic outlines and nearly all the main heights are of this composition; their disposition is irregular, and they often contain large rounded caverns. In addition to the above there are small marine deposits (e.g. on west coast of Pourniá bay), and in the eastern part (e.g. around the large salt marsh and the bay of Moúdrov) there are considerable deposits of yellowish and often sandy clay, sand, and sometimes pebbles, covering the sedimentary rocks. These deposits, which sometimes reach to nearly 250 ft. up the hill-sides and in other places form sand-dunes, probably result from the surface decomposition of the sedimentary rocks under the action of wind. It is through these sandy and loamy deposits that the streams of the eastern part cut their deep steep-sided channels.

No traces of mineral ores have been discovered in Lémnos, though a small island off the north-west coast bears a name, Siderites, indicating iron, though it is of volcanic composition. At the foot of Mount Hágios Elías, at the contact of the volcanic and schist rocks, is a hot spring, much resorted to for its medicinal properties, and in the north-east, not far from Hekatonkephalaís bay, is a pit where a reddish clay, famous in antiquity and throughout the Middle Ages and

until-recent years for its magical healing properties, was yearly extracted with religious ceremonies.

No special information is available for the climate of Lémnos, and its lack of marked features implies an absence of strong local characteristics. In general its climate resembles that of Ímvros, but its bareness and the sandy flatness of the eastern parts make it unpleasantly hot in summer. The eastern portion on account of its lowness suffers severely from the winds. (See also note on 'Climate', p. 177.)

The island is almost destitute of vegetation. Forests are said once to have abounded, but they have been destroyed and kept from reviving mainly by goats, and even the scanty scrub that still exists is systematically cut for fuel. The volcanic regions are absolutely bare. In the other parts there is occasional low and mostly dry-looking scrub, but most of these parts are quite bare also. To the absence of forests are perhaps due the absence of flowing streams and the restriction of the water-supply to wells. Around these latter and near the houses a few trees of cultivation grow—poplar, fig, &c.—but even these oases are scanty. The aspect of the island, especially in summer, is one of startling and even savage barrenness. The black bristling scoriated volcanic summits protruding from a glaring reddish-yellow but equally desolate underground leave a strange impression, heightened by the fantastic outlines of the coast and the sparkling blue of the bays. This is in the west; the east is more monotonously sterile.

Game—partridges, pigeons, quails, and rabbits—is said to abound in the more deserted parts, and there are abundant domesticated animals (see below).

HISTORY AND INHABITANTS

The chief importance of Lémnos in antiquity lay, and still lies, in its possession of good harbours so situated as to command the main sea-routes of the northern Aegean. Chief of these routes is that to the Dardanelles, and the facts which underlie the legends concerning the connexion of the

Argonauts and Lémnos are no doubt essentially the same as those which to-day make Moúdros bay a point of strategic importance. The possession also of an almost impregnable fortress commanding the then most useful harbour (Kástro) was another circumstance of importance, and it was these two facts which lay at the bottom of the evil reputation for violence and bloody deeds which clung to the island in ancient days. The island was of first-class importance to Athens for its Black Sea corn trade, and was held in succession by each of the powers—Persian, Macedonian, Roman—which struggled for supremacy in the Aegean. The island became Christian in the fourth century, and the bishop of Lémnos who appeared at the Council of Nicaea (A.D. 325) was the predecessor of a whole line of Greek Orthodox dignitaries which has continued, apparently without interruption, down to the present day.

Along with the other islands of the northern Aegean Lémnos passed (about 1355) into the hands of the Gatelusio family (see p. 18) and in 1478 was taken by the Turks, remaining with them until 1655, when it was conquered by the Venetians. These latter, however, held it only a year, abandoning it after a three months' siege of the capital, conducted by the Turkish vizier Kiuperli. In 1770 the fortress was again subjected to a siege, this time by the Russian fleet under Count Orloff, who after two months, on the arrival of Turkish reinforcements, abandoned the attempt. Finally, in 1905, the port and fortress of Kástro were occupied, along with that of Mytiléne, by an international force as a means of persuading the Sultan to recognize financial control in Macedonia. Turkish rule in Lémnos seems to have been marked by nothing particularly untoward. The island was a *kaza* under a *kaimmakam*; a small garrison, besides the administrative officials, was stationed at Kástro, and the fortress, obsolete since the nineteenth century, was jealously guarded. Later the status of the island was raised to that of a *sanjak* of the Archipelago *vilayet* administered by a *mutessarif*, with Ímvros, Samothráke, and perhaps some other neighbouring islands as subdivisions (*kazas*). The Turks also

revived the Roman use of Lémnos as a place of banishment, and numerous broken viziers were resident at Kástro in quite recent years. Mouódros bay has been a frequent station for the British fleet, and during the European war it has been used as a regular naval base.

In the first Balkan war (1912-13) Lémnos, along with most of the other neighbouring islands, was seized by the Greeks, and their tenure was provisionally sanctioned by the Great Powers in their note presented at Athens in 1914. The island in 1914 was constituted part of the province (*nomós*) of Lésvos (capital Mytiléne) and has apparently been provisionally administered by a special commissioner, though during the war (since 1915) the British forces were for some time in occupation.

The population has always been prevailingly Greek. The Turkish population has greatly decreased since the island became Greek, but even before (e.g. latter part of nineteenth century) the Turks were confined to the capital and one or two villages and consisted mainly of officials, soldiers, and exiles. The Turkish landed proprietor had his cultivation done mostly by Christians and lived in the town, and the Turkish peasant (cf. western Asia Minor to-day) was steadily ousted by Greek rivals. Living conditions are fairly normal, but the heat is trying in summer; the winds are troublesome in the eastern parts, and malaria is prevalent in the low and marshy ground. The diet of the Lemnians is as simple as the nature of their island necessitates, and consists mainly of hard coarse bread, vegetables, milk and cheese, with wine, eggs, fish, and occasional meat for those who can afford them. Wine in vintage season is plentiful, but olives are scarce. In the capital the style of dress is prevailingly European and even modern, and the islanders as a whole are not much different from other Aegean islanders. A good deal of the peasant's wardrobe is entirely home-made, and, as in Samothráke, the shepherds are somewhat distinctive, wearing a costume nearly all white, composed mainly of home-spun white woollen garments (vest, cap) and skin (jacket), with short baggy breeches and black gaiters. These shepherds are

a rather fine type, with gaunt and prominent features, long black locks, and sharp eyes. They carry long crooks.

The isolation of Lémnos is more apparent than real, and the people display considerable knowledge of the world and of affairs. This is due mainly to emigration. The Lemnians who emigrate generally return at last and bring with them money and new fashions and ideas. There was also, and perhaps still is, a traditional and active connexion with Egypt (Alexandria), and the exiled Turks added an element of variety. The islanders—at least in the capital and in Mouódros village—displayed even in Turkish times praiseworthy enthusiasm in the matter of education, and Greek schools were supported by them in the two places mentioned. Education was controlled by the Church. The building of churches was also a favourite hobby, symbolizing for the Lemnians, as for most subject Greeks, their national and spiritual aspirations. The continuous presence of a high dignitary of the Greek Orthodox Church favoured this movement, and, as soon as the Turkish Government began to sell—for large sums—sites and rights to build Christian churches, numerous fine churches arose—often out of the débris of ruined ancient towns—and money was spent lavishly upon them. These churches are often ludicrously disproportionate to the miserable villages which they overtop. There are in addition about seven convents and monasteries, besides the usual chapels, upon conspicuous summits.

Owing to the lack of timber and good building-stone the houses—except in the capital and larger villages—are mostly poor and built of rubble, with thick walls. They are always roofed with tiles. Better houses are two-storied, plastered, and washed white or blue. The poorer and lower houses are often hard to distinguish from their background. The Lemnians have a reputation for inhospitality which is probably undeserved. The islanders have much the same manners, amusements, virtues, and vices as other Aegean Greeks. The capital has a gloomy appearance from the harbour, and Mouódros village is depressing.

INDUSTRIES

Pastoral and agricultural pursuits are practically the only industries. For its size Lémnos has probably more level and cultivable ground than any other Aegean island, but the absence of forests and the consequent exposure to wind, besides the heat and lack of water for irrigation, affect agriculture adversely. The chief areas under cultivation are: the plain stretching north-east from Mouódros village to Ormanó; that stretching from the head of Kondiá bay up the west side of Mouódros bay; the Kástro valley, in the west, as far inland (north-east) as the foot of Mount Hágios Elías; the small Psín plain in the extreme south-east; the small Tothános valley in the south-west; and the northern part of the flats north of Mouódros bay. There are other cultivated parts (e.g. towards the north-east) of less importance, but parts of the plains which could probably be brought under cultivation, if drained, are at present used as pasture. Such are the low ground—marshy in winter—immediately north of Mouódros bay and the eastern part of the Mouódros plain adjoining the east coast. These plains for the most part have light, thin, and sometimes sandy soil, that of Psín being especially sandy. Water for agricultural purposes is sufficient in normal seasons, but the island suffers from occasional drought.

The greatest extent of cultivated land is probably under corn, chiefly barley, though wheat and mixed wheat and barley (*smigádi*) are also grown in fair quantity. Vines flourish in the Kondiá, Psín, Tothános, and other valleys, and, though they have suffered at times from disease, yield a copious vintage of good quality. Cotton, of the dwarf herbaceous variety, is grown around Mouódros village, and sesame and tobacco have at various times also been cultivated. Sesame is useful for its oil, which helps to replace olive-oil, as olive-trees in Lémnos are almost completely lacking. In addition pulse (beans) and vegetables (particularly onions and garlic) are grown. The paucity even of cultivated trees has been noted. Most extraordinary is the absence of olives.

In the gardens occasional fruit-trees (fig, almond, apricot, cherry, mulberry, and pomegranate) are seen, but the total fruit production is insignificant.

The methods of cultivation employed are primitive. In the eastern and more level parts there are usually no divisions between the fields nor are the vineyards walled, though in marshy localities there are often shallow ditches. In the rockier west, however, the fields and gardens are generally marked off with stone walls, and there is also a certain amount of terracing up the hill-sides for vines, &c. The Lemnian cultivator, though mostly the proprietor of his own land, is not an energetic person, a fact partly due to the climate but largely also to his subject condition. Now that the island is Greek there may be a gradual improvement.

Pastoral pursuits are important, and the chief wealth of the island lies in its live-stock. Nearly all the mountainous and hilly districts, barren as they are, are useful for pasture. In addition the marshy parts of the larger flats are covered with coarse grass and serve as pasturage. The island possesses large flocks of sheep, besides considerable numbers of goats, oxen (used in ploughing), mules, donkeys, pigs, and a breed of ponies. The shepherds form a class somewhat apart and have been referred to above (p. 65).

Bee-keeping is a minor industry: the hives are made of boards. Silkworm-rearing exists but is unimportant, and a little fishing, including shell-fishing, is carried on from Kástro and Pourniá bays as centres, and sponges are said to be found round the coasts. Mining is non-existent, and no mineral ores are known to occur. The women of Lémnos spin and weave household garments from the cotton and wool produced in the island; tiles are made in the valley not far from the capital, and some are exported; a certain proportion of the wine was and perhaps still is distilled for spirits. The corn required for human use is milled on the island, the round white towers and sail-spread arms of these windmills being a conspicuous feature of Lémnos (cf. Sámos, Chíos, &c.) The lack of wood is a serious obstacle to building and industrial development.

The produce of Lémnos is estimated as follows: grain 257,000 bushels, of which about 177,000 bushels are barley, 46,000 bushels mixed barley and wheat, and 34,000 bushels pure wheat (this is an average yield and may be higher in good years and is possibly capable of improvement); wine 170,000–180,000 gallons. There are in addition; sheep 50,000–60,000; goats 8,000–10,000; pigs 2,000–3,000; besides about 1,500 asses, 1,000 ponies, and 500 mules. Figures for the less important agricultural products are lacking.

About half the barley, considerable numbers of cattle (chiefly lambs), wool, cheese, tiles, and perhaps a little wine, spirits, and tobacco are exported. Imports are mainly olive-oil, wood (from Thásos and the Macedonian coast), manufactured goods, and colonial products (tea, coffee, sugar, &c.). Trade was formerly chiefly centred in the capital, but Moúdrov village has now probably a fair share. During last century (1860) the island was said to possess ships totalling 20,000 tons, sailing partly under the Greek and partly under the Turkish flag. At the present day, however, it seems to possess no more than the few (12–20) sailing craft, besides small fishing and rowing boats, which most islands can boast. In Turkish times Lémnos used to pay about £5,600 (exclusive of capitation tax) to the Turkish Government in taxes. This may perhaps be taken as representing roughly 10 per cent. of the value of the annual production. The island has probably profited by the long stay of the British fleet in Moúdrov bay.

POPULATION AND SETTLEMENT

The population about 1855 was reckoned at 22,000, of whom 2,000 were Moslems. In 1913 the numbers are given as 22,893, of whom about 2,000 were Moslems, but it should be noted that both these estimates are from Greek sources and that another authority (probably based on Turkish figures) gives the Moslems (1914) as 3,000. The Moslems have probably dwindled since then, but the total population has risen to about 27,000. This population is distributed in the capital and in some 40 villages, many of which, however, are mere hamlets.

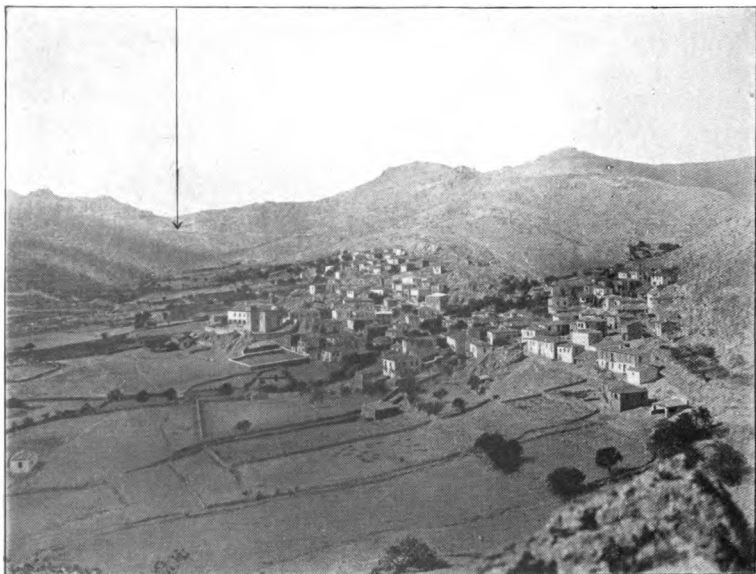
The capital, **Kástro** (pop. about 5,000, including most of the Moslems, P. T. O., C. H.), is situated on the south-west coast. The site has been occupied since the earliest days and is well situated as a port of call on the north-east (Black Sea) trade-routes from southern Greece, and the harbour is sheltered from the prevailing north-east winds. The town, which occupies a position much favoured in ancient times (cf. Ímvros, Mytiléne), stretches north and south athwart the neck of a peninsula which projects westwards and forms two semicircular bays, one to the north and one to the south of it. The peninsula is lofty (about 400 ft.) and precipitous at its extremity, but slopes down with gentle undulations to the land behind. The isthmus is quite narrow and the bays on either side have sandy beaches. The peninsula was a source of great strength in ancient times and offered protection to shipping. It is at present crowned by obsolete fortifications. The town lies along part of both bays, close to the water. In the southern bay is a quay and behind this the Turkish quarter, with narrow crooked streets and crowded houses. The northern part of the town is Greek and has larger houses and more space, and on hills a little to the north is a more open suburb with houses of the well-to-do. The houses are mainly two-storied, with tiled roofs, and tinted in pale shades. There are the usual churches, a mosque, schools, &c. The main street runs parallel with the shores of the bays but is screened from them by houses. A good deal of the island trade is centred in the capital.

The villages of Lémnos are on the whole poor, lifeless, and miserable-looking. The better ones contain some large houses, but many have only hovels and dirty uneven streets. Nearly all have good wells, and the size and magnificence of the churches have already been noted (p. 66). A feature of the villages are the windmills—squat, round, whitewashed, and with a large circular spread of sail. They are either lined along the approach to the village or crown ridges and heights behind. These windmills are often conspicuous from sea, but the villages themselves are often hard to discern. Those in the hilly parts of the

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PLATE II

Zig-Zag Road from Kastro.



*Tothanos from summit of a hill about 400
yards to S.E.*

Ordnance Survey, March, 1919.

(To face p. 71)

north-west are built on extremely steep hill-sides and contrast with the commoner kind on the flat ground. The only village of importance is Mouódros, on the low east shore of the inner part of that bay, with a small harbour, a post and telegraph station, custom-house, port office, and 1,500–2,000 inhabitants. Other villages that may be mentioned are: Tothános in a cultivated south-western valley shut in by rough hills and opening to a bay on the south-west coast; Livádi (Livadochóri), a village of the plains near the north-west of Mouódros bay; Portianós, a similar settlement farther south and west of the bay; and Psín in the small vine-growing plain near the south-west corner of the island. Besides those at Kástro and Mouódros there are custom-houses in the hamlets at the head of Kondiá and Pourniá bays, and there are military barracks at Mouódros, Talikná (north of Mouódros bay), and the capital.

HARBOURS AND COMMUNICATIONS

In Mouódros bay Lémnos possesses one of the best harbours in the Mediterranean. The outer part (i.e. as far north as the chief angle-bend) has 24–13 fathoms over a mud bottom clear of rocks and shoals except close in, and affords good anchorage for any number of vessels, being safest in summer but useful in winter also. The inner part, though much more beset with islets, rocks, and shoals, has good anchorage of almost unlimited extent in 10–6 fathoms over mud and sand. The inner harbour is sheltered from all quarters; food (meat, bread, and vegetables) can be obtained, and there is a plentiful supply of water, but the northern shore is marshy in winter and is apt to be malarious. There are small piers, one on the west coast (between Psopérago and Sarpí villages), the other at Mouódros village, where there are also a post and telegraph station and a road leading inland. The original pier at Mouódros had only very shallow water ($2\frac{1}{2}$ –3 ft.) alongside, but since 1915 about a dozen wooden trestle piers were built by the British and have 6–18 ft. of water alongside. There are three slips on the west coast of the bay, two for tugs and lighters and one for steam and other vessels. All are worked

by the same hand-capstan. There are also workshops capable of undertaking shipping repairs, and there is a Greek naval repair shop near Mouódros village.

Kondiá bay is also a safe harbour sheltered from all quarters except the SSW., with 7-10 fathoms over a mud bottom. It has several mud-banks, the accommodation is somewhat limited, and the head is marshy in winter. There are a custom-house and a few hovels near the head, but communications inland are not good. The southern of the two bays of the capital, though it has a rock in the middle, offers limited accommodation, unsafe in westerly winds. There is a small harbour with a quay (7 ft. above water and no steps) with 3-4 ft. of water alongside. This harbour can accommodate 20-30 light craft, but there are no lifting appliances. Pourniá bay is too open and shallow inshore to be of much use as a harbour. The mouth of Hekatonkephalaís bay also appears to be sanding up, and it is useless for modern purposes. The other bays of the island are more exposed and, though useful as occasional and temporary havens (e.g. Platý bay on the south-west), are not needed in view of the better harbours described above.

In 1915 two Greek lines of coasting steamers maintained a regular service between Piræus and Kavalla and between Piræus, Smyrna, and Salonica respectively. These boats called weekly (one of each line) outwards and inwards, one apparently at Mouódros and the other at the port of the capital. They connected Lémnos also with most of the neighbouring islands, and carried mails. Another line (details unknown) is also reported (1912) as serving Lémnos. There are also a fair number of small sailing craft (caïques) by which passage can be taken.

There is telegraphic communication with Salonica and also, through Ténedos, with Constantinople, and telephonic connexion with Ímvros. The two lines of telegraph belong to the Eastern Telegraph Company. Overland there is a line of telegraph from Kástro to Mouódros village, which follows the road between those two places.

Inland communication is easier than in many Aegean islands, and there is evidence for believing that there were formerly carriageable roads. At present there are three roads that deserve the name, besides tracks.

Route 1.—This, the most important, road leads from the capital to Mouódros village. It leaves the town north-east and proceeds north-east up the Kástro valley, crossing soon a broad sandy stream-bed by an iron bridge (3 piers) and higher up three torrent-beds—the first at mile $1\frac{1}{4}$ —each by a single-arched stone bridge, and then a larger stream (dry in summer) by a double-span stone bridge, and rises sharply to the mineral springs (mile $3\frac{1}{2}$). Thence the road bends east and winds up and down across the hilly country between the head of the Kástro valley and the plains about Mouódros bay, passing several hamlets and streams, one of which, in a deep gully, had (1912) a broken bridge. Winding down among the stony hills towards the east, the road crosses a watercourse (mile 7) by two single-arched stone bridges and reaches Livádi (mile $7\frac{3}{4}$) in the plain. Thence the road curves for 3 miles around the north end of Mouódros bay, crossing the flats, marshy in winter, by a causeway 3–4 ft. high and numerous muddy streams by wooden bridges and culverts—most of them extremely bad—and one two-arched stone bridge. At mile $10\frac{1}{4}$ road passes Talikná village ($\frac{1}{4}$ mile to north). Thence road bends southwards and skirts at a distance of 200–300 yds. the north-east shore of the bay, passing over marshy ground and streams by a causeway and 6 bridges similar to those just preceding. Thence road goes over a short stretch of bad sand to Mouódros village (mile $13\frac{1}{4}$). The road is 15 ft. wide and in parts is well made, but it has some steep gradients, and in 1912 it was largely in disrepair. Water is plentiful along the route, and the road could be made serviceable for ordinary traffic without much expense. The telegraph line from Kástro to Mouódros follows this route in the main.

Route 2.—This road leads north from Kástro along the coast towards Káspaka bay; the terminus is uncertain. Near the town the road is well made, metalled, and 15 ft.

wide; it crosses the stream south of Mount Athanási by a stone bridge.

Route 3.—This road—also metalled, in fair condition, and 12 ft. wide—leads south-east from Kástro over rough hills to the Platý valley and thence over another ridge to Tothános village, about 3 miles in all.

In addition several short but good roads have been constructed by the British recently (1915–16).

Besides the above roads (about 20 miles in all) there are only tracks, mostly rocky, narrow, and rough, but not difficult compared with most island tracks. There are no native wheeled vehicles, and donkeys and ponies (both fairly plentiful) are used for transport.

HAGIOSTRÁTE

This island, whose full name is Hágios Efstrátios, is more commonly known under its local name of Aistráte or simply Stráte. It is situated some 18 miles SSW. of Lémnos, 42 miles north-east of Skýros, 46 miles WNW. of Mytiléne, and 35 miles ENE. of Pipéri, the nearest of the Magnesian Isles. It thus lies in the open sea, a lonely rock, almost at the centre of the northern Aegean. It is included in the 100-fathom line which encloses Lémnos and which swings round Hagiostráte at a distance of 7–9 miles. The nearer waters are 50–30 fathoms along the west and south-east quite close in, but on the north-east side, where there is a small off-lying rock, shallower water (6–26 fathoms) stretches out for 2–3 and in one direction (north-east) for about 4 miles.

The island is triangular in shape with its angles facing north, east, and south respectively. The eastern angle is practically a right angle, and the southern land-angle is the most elongated. The coasts are straight and closed, particularly those facing north-east and south-east. The west coast is slightly convex and has several small open bights and coves with blunt promontories between them. The coasts are almost everywhere high, precipitous, and forbidding, the only low beaches being along the north-east (close above the

PLATE III



*On the path from Kondia to the Custom House.
Foot of Mt. Kondia on the right.*

Ordnance Survey, March, 1919.

(To face p. 74)

eastern point) and at the head of the small bays mentioned. From the most northerly point to the most southerly is as near as possible 7 miles; from the most easterly point due west measures $4\frac{1}{2}$ miles; and the area is roughly $17\frac{1}{2}$ square miles.

The island is occupied by a range of hills which sweep from the north corner in a series of irregular heights south-east to near the east corner, where they rise to nearly 1,000 ft. (973 ft.). Thence the range runs SSW., sinking to the southern extremity of the island. Westwards this chain—which lies close along the north and east coasts and falls steeply to them—sends out longer spurs to the west coast. These spurs are furrowed with long ravines. Geologically the island is said to resemble Lémnos with its volcanic formations. The island is well covered with forest and grows fine valonia oaks. The valleys are well watered and fertile.

In Turkish days Hagiostráte was a subdivision of the *sanjak* of Lémnos and was governed by a *mudir*. Its inhabitants, who number about 2,000 and are all Greeks, have for long been spiritually subject to the bishop of Lémnos. The island was taken by the Greeks at the outbreak of the Balkan wars and now forms part of the *nomós* of Lésvos (capital Mytiléne).

The valonia oak forests are the chief source of wealth, producing 200–400 tons of good-quality valonia annually. The valleys are fertile, and fruit and vegetables, mainly pulse, are grown. The pulse crop amounts to 12–20 tons annually. These commodities are exported.

There is only one settlement of any size, the village of Hágios Efstrátios (pop. 1,570) on a small sandy-shored bay on the north-west coast. This serves as the island port, and steamers of one of the Greek island lines (Goudis) call weekly *en route* from Mytiléne to Lémnos and connect Hagiostráte with those and other islands and with Piræus. These steamers and sailing craft are the only means of external communication. The island tracks are rough and lead mostly over hilly country.

SECTION II. CENTRAL GROUP

UNDER this heading are comprised the islands of Mytiléne (660–670 sq. miles), Chíos (320–330 sq. miles), Sámos (180–190 sq. miles), and Ikaría (90 sq. miles), together with the smaller island of Psará (16 sq. miles) and the groups of Oinoúsai and Phoúrnoi, besides a few other islets and rocks.

These islands form a group to an even less degree than the islands of the northern Aegean, but they resemble one another in many important respects and are conveniently considered together.

They are all situated along the Asiatic coast, and nearly all—Ikaría is the only important exception—are in close physical and climatic connexion with it. They all contain fairly high hills, but most of them also have a good share of rich cultivable soil, abundant water, and a highly favourable climate. They possess also a certain amount of mineral wealth. They have always been inhabited almost exclusively by Greeks, and in spite of their diverse fortunes this has had a controlling influence on their development. Most important in all periods has been their position over against western Asia Minor with its rich valleys and prosperous centres. These islands—while their own resources and position guaranteed them a considerable measure of economic independence—have supplemented that fortune and risen in ancient as in modern times to first-class importance in the Aegean and Levant as intermediaries between eastern and western trade, civilization, and political culture. In direct contact with vital trade-centres and trade-routes of the East (Constantinople, Smyrna, &c.) they have also had easy access—in a way in which Rhodes and Crete have not—to the heart of Greece, and, while they have vied with Greece in love of freedom, enlightenment, enterprise, and industry, they have stood over against the Turk-ridden mainland as beacons of encourage-

ment and bulwarks of Hellenism. Taken together they are, along with Crete, perhaps the most interesting region economically, culturally, and historically of the kingdom of Greece.

MITYLÉNE

PHYSICAL FEATURES

Mytiléne (or Mityléne), the largest and most important Greek island after Crete, fits close against the west coast of Asia Minor north of its centre, looking like a gigantic rock all but plugging up the mouth of the Adramyttic gulf. A better description of it—and perhaps substantially true—is that it is a fragment, broken away from the Troad land-mass on the north and the Pergamene highlands on the east and still indicating in its triangular form and straight bounding channels on north and east its original connexion. Of these channels that on the north has a width of only 5–6 miles, is straight-sided, deep, and clear; that on the east is wider (10–11 miles; nearest point to Asia Minor 8 miles), shallower, more irregular, and constricted across its northern entrance by numerous islets and rocks. The sea-interval on the south is greater—rather over 19 miles from the Karaburun peninsula and 29 miles from Chíos. Of other Greek islands Ténedos is about the same distance north of Mytiléne as Chíos is south of it, while Lémnos is some 45 miles away (from Port Sígri to the entrance of Moúdro's bay is about 50 miles).

The island lies within the 100-fathom line, which, however, approaches to within 2–3 miles of the south and north-west coasts but draws farther out at the west end. The submarine coastal slopes are almost everywhere steep: there are stretches on the east and south with 1–5 fathoms a cable or so out, but elsewhere there are 12–30 fathoms close in, and there are few shoals and sand-banks and not many rocks or reefs. The eastern channel is the shallowest, having 19–30 fathoms over large parts of it. In the northern channel depths of 50–70 fathoms prevail, rapidly deepening to over 150 fathoms on the west, where it opens on the Aegean.

The southern and broadest channel is clear and deep (100–200 fathoms).

In form Mytiléne is triangular, though each of its angles—directed SE., NNE., and W. respectively—is blunted. The sides are fairly regular lines of coast—the southern side or base particularly, in spite of a slight southward curve, being straightest. This last is about 45 miles long, that facing eastwards being about 30 miles and that towards the north-west roughly 25 miles. The gulf of Kalloné, running into the heart of the island from about the middle of the south coast, gives the whole a form curiously like a crab's claw, of which the left-hand (eastern) pincer, with its similar gulf of Hiéra, is again like a smaller claw. The extreme length (from Cape Sígri to Cape Maléa, WNW.–ESE.) is 44 miles, and the extreme breadth (from Cape Sykamiá to Cape Voúrkos, NNE.–SSW.) is about 23 miles. The area is estimated at 660–670 square miles, the seventh largest island in the Mediterranean.

The two most striking coastal features are the gulfs of Kalloné and Hiéra. The former is a sack-like opening stretching some 13 miles in a north-easterly direction from a narrow entrance on the south-west coast. The entrance is irregular, about $2\frac{1}{2}$ miles long (south-west to north-east), and about $\frac{1}{2}$ mile broad at either extremity. Into its northern side penetrates a small irregular bay. The gulf within in its southern half is 2–3 miles wide but farther in expands to 4 miles. The entrance is rocky-sided, but the inner shores are in general straight, sandy, and bordered with shallow water and shoals. From the head of the gulf the north-east coast is distant only $7\frac{1}{2}$ miles and the north-west coast 8 miles. The gulf of Hiéra is somewhat similar, but smaller. Its mouth lies 2–3 miles west of the south-eastern extremity of the island (Cape Maléa), and the entrance—an irregular channel between rocky hills—runs NNW. for over 3 miles, never much broader than $\frac{1}{2}$ mile and in places only 200–300 yds. across. Inside lies an oval water (longer axis, SSE.–NNW., $4\frac{1}{2}$ miles; shorter axis, NE.–SW., 3 miles), shut

in by high hills with fairly straight coast-line fringed with shoals except on the south-east. On the east side is a narrow shingly beach backed by low earth banks. The gulf as a whole converts the south-eastern corner of the island into a long bottle-shaped peninsula. The only other important bay is that of Sígri, at the western end of the island, an oblong stretch 3 miles long (north to south), 1 mile broad, very irregular in outline and enclosed by promontories on the north and south and sheltered from the north-west and west by a long thin curving island and an islet farther south. There are other openings, such as Makré bay (in the northern part of which is a group of small rocky islets called Lefkaí in ancient times because of their white cliffs) and another similar and smaller bay on the north-east, and Pétra bay on the north-west, but these are triangular open bights. Besides these there are only a few coves.

Taken as a whole the coast is bold and rocky but not precipitous. The south-eastern parts are cliffy, and there are other cliff-stretches along the north-east and south-west, but none of these are very striking. On the other hand the hills, especially on the south-east, north, and south-west, mostly back the coasts steeply, though there is often a narrow low strip along the shore. There is a considerable variety of local coastal variation and types; sandy or shingly beaches occur mainly in the two large gulfs and also in stretches along the south coast.

Practically the whole of the interior is hilly. The hills of Mytiléne occasionally attain the dignity of mountains, but in general appearance they are somewhat uniform, monotonous, and featureless. Their grouping is irregular, and there are no clear ranges, though there appear to be three main masses bridged together by continuous and rough highlands. Chief of these masses is that of Hágios Elías (Olympus), between the gulfs of Kalloné and Hiéra in the south-east. Mount Hágios Elías itself is the highest summit (3,248 ft.) and the most striking physical feature of the island. It consists of a limestone spine protruding

sharply from a rough upland, and falls away on the north in a sheer cliff of over 600 ft. From the east and south-east it appears as a conical summit ; from the west more angular but less prominent. Westwards from its summit runs a sharp ridge with pointed crests, lower but reaching 2,150 ft. at the western end. Spread around this central massif is a region of confused uplands, with scattered conical summits and flattened surfaces deeply furrowed from all sides except the north by tangled ravines and valleys. On the east these uplands fall steeply opposite Mount Hágios Elías on Hiéra gulf, but farther south along the same gulf the descents are gentler. On the west they subside in stony irregular hills to the gulf of Kalloné. Southwards they spread out and frown upon the sea with sharp ravine-cut profiles and precipitous faces. The general level of the central part of this upland is 1,150–1,400 ft. (though there are heights of 2,300 ft. and 2,400 ft.), and towards the north it passes over into a somewhat lower plateau (alt. 500–800 ft.), which occupies all the space between the head of the gulf of Kalloné and the east coast. This plateau is fairly uniform, but it is eroded on all sides by ravines, and on the north is a large amphitheatre of volcanic formation, so that in general it may be described as a tangled region of rocky hills. Along the east it falls steeply but not precipitously on the coast, and towards the south-east it is extended by the irregular hill-belt which forms the south-eastern peninsula. These last-mentioned hills are not a range so much as a belt of irregular hill-country with some conical peaks and an elevation of 800–1,000 ft. Towards the south they become wilder and rise to 1,738 ft. near the southern extremity. Towards the east they present an undulating crest and are fairly soft-faced, but on the west they fall abruptly on the gulf of Hiéra.

The northern part of the island is occupied by the bare and striking ridge which culminates in another Mount Hágios Elías, a towering conical peak 2,756 ft. high. This massif fills all the northern part with tangled subfeatures abounding in ravines and frequent precipices, and runs across into the

uplands described before in a tract of very broken and hilly country. Southwards the spurs from these heights remain high and wild till they decline steeply on the plain north of Kalloné gulf. The north-eastern corner of the island is somewhat distinctive, having high flat-topped tablelands, with sharp edges and clear-cut ravines looking as though they have been carved out with a knife.

Along the north-west side of Mytiléne, parallel with the north-west coast and about midway between it and the gulf of Kalloné, stretches a belt of hills with heights, mostly sharp and bare, ranging from 1,300 ft. to 2,000 ft. There is no clear formation, the whole region being rough and irregular, sloping somewhat steeply to the north-east coast but more gently towards the head and north-west of Kalloné gulf. On both sides (north-west and south-east) it is furrowed out by stream-courses into valleys, narrow above, gentler towards their mouths. This hill-belt expands towards the south-west into another broad, stony, and irregular upland occupying all the space between Kalloné and the west coast. At the east and west ends rise heights of 1,935 ft. and 1,690 ft. respectively, the latter (Mount Orthymnos) being a sharp conical peak overlooking Sígri harbour. Like the other uplands, this is furrowed on all sides by tangled valleys, but the coastal slope is nowhere steep, nor are the contours striking except on the east, where these hills thrust hard and high over the south-west shores of the gulf of Kalloné. Seen from the west the hills of Mytiléne appear most regular, more like a rough plateau with numerous dips and undulating foothills.

From the above description it will be gathered that the valleys are mostly tangled and lost amidst stony hills. On the other hand many of them in their lower parts have a fair amount of bottom and side soil, and many of the glens of the north-east, north, north-west, and south-west are cultivated. There are also several plains, besides a fair amount of soft sloping ground. The chief plains are around the heads of the two large gulfs—north and a little north-west of the gulf of Kalloné and north-west and west of the gulf of Hiéra, the

former being the larger. These plains are in places nearly 2 miles wide, but their seaward parts are marshy, and they are mostly fringing strips between hill and sea. Other similar strips lie along the east coast north and south of the capital, and south of Mólivos along the coast; there are in addition several delta-plains, such as at Pétra (south of Mólivos), below Eresós (in the south-west), and elsewhere along the north-west, north-east, and south coasts. All these plains and lowlands are cut off by rocky, often barren and abrupt heights.

Mytiléne abounds in running water in the winter, and, though many of the streams are dry in summer, there is never a dearth of water. The two gulfs receive around their heads numerous streams, many of them with a clear rushing flow. The northern hills also send from their ravines strong streams to the north-west and north-east coasts, the mouths of the latter having sandy bars in front of them. The western part of the island is dry: a fair-sized stream drains the Eresós valley, but it is lost in sand before it reaches the sea. There are abundant good wells and springs, notably at Díp, Mólivos, and Keramiá, and a good deal of the ground around the heads of the gulfs of Kalloné and Hiéra and near Péráma is marshy in winter. At the head of the former gulf is a salt lagoon which dries in summer. There is also, at the northern base of the southern Mount Hágios Elías, a large reed-grown marsh at a height of about 2,500 ft., and there is another smaller one farther west at a height of about 600 ft.

GEOLOGY AND CLIMATE

The rock formations of Mytiléne fall into two clear groups, the gulf of Kalloné forming roughly the division between them. The western and larger part is composed almost entirely of volcanic formations; the other portion—the rest of the island lying east and south-east of lines drawn from the eastern head of the gulf of Kalloné due south to the south coast and north-east to Makré bay—is composed of sedimentary and some igneous rocks. The second region

consists of continuous alternations of schists—mainly mica and chlorite schists—with amphibolites and marble, the latter covering considerable stretches (e. g. on the peninsula north and south of the capital) and attaining in places (e. g. the southern Mount Hágios Elías) great thickness. The marble of Mytiléne is often pure white ; at other times it has foreign ingredients and is red-veined, yellow, grey, or black. Along the west side of the schist and marble region stretches a broad belt of serpentines. All the west and north of the island, as well as the land-angle lying south of the gulf of Kallóné, is of volcanic formation. The northern and north-eastern hills, as well as most of the hill-country north-west of the gulf of Kallóné, are andesite, while due west of that gulf are labradorite and basalt areas. Basalt also occurs in small patches along the east coast north and south of the capital. Practically all the rest of the island (i. e. the west) is composed of volcanic tufa or conglomerates of the volcanic rocks above mentioned. In addition there should be mentioned small coastal strips of recent marine formations near the north-west and south-east corners of Mytiléne, and the plains around the head and flanks of the gulfs of Kallóné and Hiéra, which are mainly alluvial.

The geological formation is reflected in the landscape and vegetation. The western half with its barren hills, sharp bare peaks, and hard profiles differs visibly from the softer forms and wooded contours of the south-east, though the latter region also, with its limestone cliffs, is not characterless.

Numerous evidences of volcanic agencies exist. The island is subject to earthquakes, some of which (e. g. that of 1865) have been severe. There are also a number of thermal springs, most of them near the coast. Most notable are : that at Thermé, with a temperature of 122° F., containing sodium, magnesium, and other chlorides, besides traces of other salts ; that at Polychnítos (temp. 185° F.), similarly impregnated, and having a remarkably strong and copious flow.

The island is not rich in minerals. Traces of copper are to be found near Mólivos (north-west), in the hills west of

Kallonégulf, and near the north-east coast (north of Mystegná). Evidences of iron occur west of Potamós (south coast) and in the coastal hills west of the entrance to Kalloné gulf. Chrome iron, combined with chalcedony, is found in the serpentine north-east of the southern Mount Hágios Elías, and veins of quartz containing antimony in the hills south-east of that mountain. Alum also occurs in various places in the west of the island (e. g. in the north-west near the northern Mount Hágios Elías and in the hills west of the entrance to the gulf of Kalloné). Silver-lead ores are also said to occur, and talc is found above Plomári. None of these deposits, except the alum and the talc, appear to be in any quantity.

Full data are lacking for describing the climate of Mytiléne. In general it has the climate of the north-eastern Aegean, little modified by local features (since these are not particularly well marked) but more under the influence, particularly as regards temperature and rainfall, of the mountain masses on the mainland to north and east. The prevailing winds throughout the year are from the north and north-east and are cold in winter and cool in summer. The south-westerly winds are hot and unpleasant, come on in sudden storms, and last 3-4 days. Local winds are dependent upon the channel to the east and the land-masses beyond. The climate is equable, 45° F. being an average winter temperature and 64·7° F. an average summer one. It seldom freezes, though a temperature as low as 18° F. has been recorded, and the north-east winter winds sometimes bring snow. Autumn lasts from the beginning of September to the end of November. The rainfall occurs almost entirely in winter, though heavy and continuous rain has been known in July. January and February are the wettest months with a maximum of 9·4 inches. The annual rainfall is subject to great variations, ranging between 17·4 inches (1912) and 41 inches (1900). An average taken over 18 years gives 27·8 inches per annum.

On the whole Mytiléne enjoys a good climate, never excessively hot or cold, with sufficient moisture, no violent

storms, but cool sea-breezes. The invigorating character of the atmosphere has often been commented upon, and the island is a favourite summer resort of the Levantines. The climate within and around the two large gulfs is close and oppressive. (See also note on 'Climate', p. 177.)

FLORA AND FAUNA

In spite of its bare hills and desolate appearance from the west, Mytiléne is fairly well clothed with vegetation. Olive and other trees of cultivation cover about a quarter of the whole island and are the most conspicuous, but there is a good deal of natural vegetation also, mostly in the valleys. The eastern half of the island is better clad than the western, whose volcanic rocks are often quite bare over large tracts, a circumstance to which the character of the local winds and the rainfall also contribute. Of uncultivated trees the pine is perhaps the commonest and covers all the highlands north of the gulf of Hiéra and between it and the gulf of Kallóné. In more scattered fashion it also occurs along the south-east coastal highlands—on the peninsula east of Hiéra and westwards from that gulf to within 3–4 miles of the gulf of Kallóné. Sparsely growing pines are also found on the hills west of the latter gulf and on the north-eastern hills and plateaus. Other trees are the oak, holm-oak, chestnut, plane, and poplar. Of these the oaks are found (sometimes as trees and sometimes as scrub) in the form of a dense and tangled growth above the olives along the hills fronting the south-east coast and amid the pines in the south-eastern districts. Planes, chestnuts, and poplars grow (mainly in the valleys) all over the island, but are particularly luxuriant around the gulf of Hiéra. Poplars and such cypresses as occur (e.g. round Hiéra) are probably imported. Large parts of the south-east of the island (e.g. most of the serpentine rocks east of the gulf of Kallóné and the south-eastern coastal districts) are covered with scrub—arbutus, myrtle, broom, and other—and in the northern and western valleys are brambles and briars. The hills west of the entrance of Kallóné gulf

have pines and juniper scrub. Oleanders accompany the streams ; there are many wild flowering and aromatic shrubs (*Agnus-castus*, wild marjoram (*Origanum*, called by the natives *rigani*), arums, &c.), and in spring the hill-sides and hollows are a blaze of colour from wild flowers (anemonies, &c.).

In addition to the above are trees of cultivation—olive, mulberry, walnut, pomegranate, and other fruit-trees—which fill the valleys with greenery. Special mention should be made of the valonia oaks, which are widely spread but abound chiefly and almost as forests in the north-western hills and around the gulf of Kallonné.

From the north and west Mytiléne, with its confused hills bare or only sparsely dotted with trees or scrub, appears little less harsh than most of the Aegean islands, though the impression improves on closer inspection. But on the east and south-east the island is green, soft-featured, and extremely beautiful, and the surroundings of the gulf of Hiéra, and to a less degree those of Kallonné, are lovely and worthy of any country or clime.

The fauna is scanty. There are in all probability the usual small animals (rabbits, hares, &c.) and reptiles ; partridges and quail and other birds, some of them migratory, abound in the hills ; the coasts and the two gulfs have a good supply of fish (mullet : 'sardines'). Insects, lobsters and shell-fish besides are plentiful.

HISTORY AND ADMINISTRATION

Mytiléne by reason of its size and resources, its position opposite and close to a populous and rich part of Asia Minor, and its fine natural harbours has always been regarded by foreign powers as of considerable importance. Nevertheless it has curiously little history, and this is mainly due to the character of its people, over whose heads most of the larger movements of history have passed unheeded.

In the earliest historical times the island was important as possessing forward maritime trading-posts to exploit the fertile mainland opposite and to do the carrying trade southwards

along the coast, northwards to the Black Sea, and westwards to Greece. The possession of a good port and town-site (for ancient purposes) on the eastern coast was also in its favour. Because of this position Mytiléne, with its capital (on its present site) and its other fine towns, chief of which was Methymna (Mólyvos), early rose to importance and played a leading part in Aegean maritime and trading affairs and colonization, and was noted for its wealth and culture. Consequently when Athens rose to power she found in Lesbos (as the ancient island-name was) a rival first to be ruined and then annexed, and Lesbos, which had tamely submitted to the Persian yoke, fell into the hands of Athens. Later, after the usual vicissitudes, it came into the possession of Rome by whom it was held, because of its beauty, climate, and warm baths, in high esteem and accorded special privileges.

In Byzantine times after numerous occupations (Seljuk Turks and Venetians) it was at last (1224) recovered by the Byzantine emperors and given in 1355 by the emperor John V (Palaeologos) to Francesco Gatelusio along with most of the other islands of the northern Aegean. From this time dates the political connexion of all these northern islands under Mytiléne, where were the seat and castle of the ruling family. In 1462 the Gatelusio family was overthrown by Mahomet II, and from that time till the twentieth century the island was Turkish.

Under the Turks it was a *sanjak* with three *kazas*, Mólyvos, Plomári, and Moschonésia (the group of islands in the Adramyttic gulf, north-east of Mytiléne). Like the other islands it suffered from piratical descents in the succeeding centuries, and most of the coastal villages were transferred to the hill-sides inland. The period of Turkish occupation appears to have been uneventful. The Turks garrisoned the chief forts (Mytiléne, Mólyvos, Sígri), and a considerable number of Turks settled in the island, but in general the two races, Turks and Greeks, dwelt in peace.

In the Greek War of Independence (1821-9) the Mytileneans pleaded their proximity to Turkey and the power of the

Turkish hold upon them, and took no part. For this they were rewarded with peace and quiet and a certain amount of ignominy. Turkish rule moreover, though not oppressive, discouraged enterprise, and the capacities and talents of the islanders remained largely undeveloped. During the nineteenth century, however, the Greek element began to assert itself. The Turkish peasantry was gradually displaced by the more thrifty and energetic Greeks, and was gradually confined to the capital and a few villages of the west. Greek religion and Greek education were fostered by the clergy, and gradually the island became overwhelmingly Greek in population and sentiment. Further Mytiléne became a sort of reservoir for the hellenization of the adjoining mainland, and at the same time its importance in naval affairs began to be realized by foreign powers. Sígri harbour, which along with Móudros bay dominates the main blue-water approach to the Dardanelles, began to be visited frequently by the British fleet, while the position of the capital enabled it to command the north-and-south coastwise traffic. The occupation of the capital in 1905 by an allied fleet was a means used to bring pressure upon the Sultan (see p. 64). The island attracted increasingly the attention of British, Italian, and French merchants, and at the beginning of this century Mytiléne, in spite of Turkish rule, was becoming one of the more important islands of the Mediterranean.

In the Italo-Turkish war (1911-12) Italy was prevented from occupying Mytiléne by Austria, and upon the outbreak of the first Balkan war (1912) Mytiléne was taken by the Greeks. By a note of the Great Powers presented at Athens in 1914 Mytiléne along with other Aegean islands was recognized conditionally as Greek, and, though no treaty has finally decided the status of the island, it has since then been administered by Greece. During the European war Mytiléne has been occupied by the Allies.

Under the Greek régime Mytiléne was at first governed by a prefect directly responsible to the Ministry for Foreign Affairs in Athens with independent gendarmerie and customs

authorities. In 1918 it was formed, along with Lémnos, Samothráke, Hagiostráte, Ímvros, Ténedos, and the Arginoúsai Islands, into a *nomós* (province) of the kingdom and is administered by a *nomárchos* from Mytiléne (town) as centre. The whole *nomós* sends 11 deputies to the Chamber at Athens. Before the war the island was expected to raise 12,000 men for military service, and was garrisoned by one regiment (900 men) with a little artillery stationed at the capital. The gendarme force, with administrative centre and barracks at the capital, was (1912) about 250 strong, about 40 of these, besides 50 police, being allotted to the capital. During Turkish rule there was a Greek Orthodox archbishop resident at Kalloné, but the religious administration is now in charge of two bishops resident one in the capital and the other at Achyrón (Kalloné).

INHABITANTS

The people of Mytiléne are reputedly of 'Aeolian' origin and are clearly distinguished from other island types. The men are tall, well built, and handsome, with fine regular features, dark hair and eyes, and a good carriage. The better types are reminiscent of the best Italians. The women have often been praised for their beauty, and many are beautiful, but in general they are somewhat hard-featured and masculine. Amongst them is a fair proportion of brunettes or those who combine wavy auburn hair with dark eyes or light (grey-blue) eyes with dark hair. In both sexes the impression of physical superiority is enhanced by a grave and dignified bearing and a courteous and reserved, though self-confident, manner.

Living conditions are on the whole good. The capital is said to be, for an eastern town, clean and well kept. The climate is healthy, warm but tempered by refreshing sea-breezes; the water-supply is good, and the vegetation, particularly the pines of the eastern part, gives the air a vitalizing quality. On this account, as also on account of its mineral springs, Mytiléne is much resorted to by Greeks from

Smyrna, Constantinople, and Egypt. Leprosy was endemic 60 years ago and may still exist ; the whole island is also said to be infected with malaria, but the only places bad in this respect are the flats around the gulfs of Kalloné and Hiéra. The annual death-rate stands fairly constant at 11 per 1,000.

The islanders live on the same simple fare as most other Greeks—mainly fruit, vegetables, olive-oil, eggs, and cheese. Meat is eaten sparingly, and wine, *raki*, and other drinks, though abundant, are not used in excess. The island dress for men consists of : a cloth jacket worn open and showing a stylish waistcoat, also largely open at top and bottom and displaying linen beneath ; baggy trousers reaching below the knee and long square-toed boots turned up at the toes ; a gaudy scarf and a heavy and large red cap like a fez. The women wear jacket, waistcoat, and trousers similar to the men's, but the trousers are longer and fuller and reach nearly to the ground. Their feet are bare ; over their hair they knot a coloured handkerchief. These fashions, which have displaced even more elaborate older ones, are themselves giving way to European styles.

The character and qualities of the Mytileneans mark them out for a rôle in Greek affairs of the future. Somewhat stolid, hard, practical, and unimaginative, they are manly, self-contained, and capable. Proud of their race and island, they are yet energetic and industrious. They have often been charged with lack of patriotism and with selfishness (if not worse) for their inactivity during the struggles for Greek independence, but that inactivity may also be regarded as an evidence of their sober common sense and habit of facing facts. At any rate they have at last attained, after a century of comparative peace and freedom from molestation, what Chians and Cretans attained no sooner while suffering drastic discord or mutilation. The people of Mytiléne minded their own business, while at the same time they offered a strong passive resistance to Turkish oppression by quietly fostering their own national life and ideals. As agriculturists—in spite of an appearance of laziness—they

are skilful and patient even if limited in outlook, but the charge of lack of enterprise and adaptibility is disproved by the fact that the men of the capital have won a reputation as merchants and bankers and that Mytileneans are to be found scattered along the mainland coasts as prosperous traders and shopkeepers.

The island stood high amongst Greek lands under Turkish rule for the excellence of its education. This was mainly Hellenic and encouraged by the priesthood of the Orthodox Church, whose opinion, however, was strongly backed by the common sense of the community. Education was gratuitous and supported by voluntary contribution of the communities. In addition rich men left bequests for schools and hospitals, and this custom amounted almost to an unwritten law. Primary education was universal, and there have also been excellent higher schools in the capital for many years. The educational system has now probably been assimilated to that of the kingdom.

The people are practical in their religion and superstitions. Of their spiritual leaders, notably the archbishop resident at Kallóné (see p. 89), they demanded practical leadership against the Turks. The common people retain many customs (e.g. wayside shrines, hanging rags on trees, votive offerings for healing, reverence of images such as that at Mandamádos) reminiscent of ancient worship. The three principal heights of the island (in the south-east, north, and west) and others also are crowned with shrines, and monasteries are common. The great religious festival of the year is that celebrated every August at Hagiásos, which, with its congregation of pilgrims seeking healing and its wonder-working image, resembles that of Ténos.

The social conditions are on the whole admirable. There is a general state of well-being and prosperity and no extreme wealth or poverty. The average peasant has enough and is sometimes comparatively well-to-do, and houses and domestic arrangements—except in the Turkish villages—show a fair level of comfort and civilization. The people are friendly,

fond of their pastimes (dancing and talking), and cheerful. They show a considerable degree of taste in dress and decoration. There are traces of ancient matriarchal custom, and women rank high in social status. The elder daughter is the most important member of a family, and girls must be dowered and married by their men-folk. Women also often play a large part in the management and control of the family estate, and do a good part of the agricultural labour. Young girls frequently go abroad on service for several years and return to weave with their own hand on the family loom their trousseaux. These trousseaux are highly prized and an object of feminine rivalry, and no girl will marry till she has completed her own outfit.

INDUSTRIES

In spite of Turkish rule, or rather because in general it bore so lightly on the island, Mytiléne towards the end of last century began steadily to rise in importance as a producing and trading area. It was becoming (until the Balkan wars, 1912-13) in virtue of its position a distributing centre for much of the Asia Minor coast; foreign capital and enterprise were attracted to the island, travellers from European countries paid it more attention, and industry of a modern kind began to appear. The series of wars and unsettled conditions generally, beginning from the Turko-Italian war (1911) and lasting down to the present time, have seriously affected this development, but the island has a future. Its potentialities are less, relatively as well as absolutely, than those of Crete, although its more tranquil history has enabled a higher economic level to be maintained, but it is, after Crete, probably the most valuable of Greek islands.

Agriculture and Pastoral Pursuits

Agriculture has always been the chief occupation. The south-eastern part of the island, with its schist formations, is the most fertile, but the northern and western parts, in

spite of their unpromising appearance, contain many fertile patches, and the valleys all over the island are rich and well cultivated. The chief areas of cultivation are the levels, slopes, and valleys near the heads of the gulfs of Kallóné and Hiéra and the coastal parts along the south-eastern peninsula and the south-east coast. More limited but still highly productive are the lowlands near Mólyvos and Pétra (north-west), Eresós (south-west), and the uplands around Hagiásos (near the southern Mount Hágios Elías). Besides these should be mentioned the fertile valleys of the central north-east and north-west and numerous coastal alluvial pieces. There are also traces of cultivation on a good many hill-sides and places now unoccupied, and it is probable that a good part of the pine-forest district east of the gulf of Kallóné and north of that of Hiéra could be used for growing figs and perhaps vines.

The land is almost all owned by peasant proprietors, each of whom has his olive garden and sometimes orchard, vegetable plot, and cornfields as well. The holdings are mostly extremely small and scattered, and this renders cultivation and transport difficult. A good deal of the field-work is done by women, and for the terracing and walling of olive-trees (see below) Albanians are used. Cultivation on the two chief plains is intensive; terracing is not much resorted to. There are few modern implements, and methods have been primitive, but under the influence of the buyers for manufacturers they are improving. A good deal of the cultivable soil in the west, as in Thásos and Ímvyros, lies on the coast, and the villagers, whose homes are in the hills, descend and ascend daily for their work.

By far the most important object of cultivation is the olive, for which the island is famous. In fact Mytiléne, Crete, and Corfu are the chief olive-producing islands. It is estimated that a quarter of the island is under these trees. They grow on the lowlands of the east coast for some miles north and south of the capital, reaching northwards as far as Kydóna (Baltshyk). They also grow on the hills and in the valleys around the gulf of Hiéra and along the south-east

and south coast and also among the hills east of the gulf of Kalloné as well as in the valleys all over the island. But, whereas in the west and north—the volcanic districts—the olives are in isolated groves in valleys, in the south-east they cover large and continuous areas of hill and dale, looking from a distance like a forest, nearer by more like an orchard. The gulf and hills of Hiéra particularly form a beautiful silver-green oasis, and the east coast of Mytiléne is also noticeable for its long-stretching green groves. The trees are mostly well spaced and well grown, denser in hollows and damp ground (e. g. particularly dense around the village of Mória, north of the capital), but farther apart and often on terraces on steep hill-sides. In the latter position, also, each tree has a containing semicircular wall below it. The ground between is generally ploughed. The crop, which is gathered in October, suffers, as in most Greek islands, from bad seasons, pests, and the method of beating down the fruit with poles.

A considerable amount of other fruit is grown. Vines grow mainly in the plains of Mólivos, Pétra, and Eresós, in the south-facing valleys north of the gulf of Kalloné, and on the lowlands west of that gulf. In the rockier and drier parts of the west, particularly at Mólivos, figs are plentiful, and oranges are grown around Kalloné and in other well-watered and sheltered valleys. Mulberries and nuts (walnuts, almonds, and chestnuts) also grow in valleys and around villages. The hills and valleys around Hagiásos have extensive orchards of northern fruits (plums, cherries, pears, apples, &c.), and pears also grow on the west side of the gulf of Kalloné.

Vegetables (principally onions) and melons are cultivated on the sodden ground north and west of Kalloné gulf, and tobacco also is grown there and along the east coast. In poorer and stonier parts, mainly at higher levels, corn—mainly wheat, some barley, and a little maize—is grown. It is confined chiefly to the north and west and is raised in no great quantity. Of importance are the valonia oaks, which grow well on the stony hills anywhere but are most abundant in the hills west

of Kalloné gulf and in the north-western hills between Tsoukalochóri and Telónia, where they form a forest.

Complete figures for the amount of agricultural production are lacking. The olive crop varies between about 100,000 tons in good years and 20,000–30,000 tons in poor years. An exceptional crop (1911) gave some 150,000 tons, and a very poor one (1912) only about 11,000 tons. The value of a medium crop is estimated at £350,000–£400,000, though good crops have been worth over £1,000,000. The valonia crop also varies, ranging between 1,500 and 3,000 tons—average value about £20,000. The fruit and vegetable crop ranges in value between £40,000 and £70,000. The tobacco production is small, and corn is grown sufficient only for 2–3 months of home consumption.

In addition to the above there are some 120,000 sheep, 20,000 goats, 2,600 oxen, 3,500 mules, 3,200 asses, 1,500 pigs, and 1,800 horses. The horses are poor in quality; in the Sígri district (west) there is a breed of wild ponies rather larger than Shetland ponies. Pastoral pursuits as a whole are unimportant, though there is good spring pasturage in the eastern hills. The usual sheep and goat's-milk cheese is made, and some of it is exported.

Manufactures and Minor Industries

The two chief manufactures are olive-oil and soap-making. Of recent years there has been a large increase in mechanically worked (steam and gas) oil-presses, replacing in the more important centres the old wooden hand-presses, which are still used in the villages. There are some 180 presses in the island (about 100 of them worked by machinery), but many of these are small and in poor seasons work only for short periods. The most important factories are in the capital (3 or 4), Potamós (3 or 4), and Pérama (2 very large), and there are others at Mandamádos, Eresós, Lisvóri, Pámphylla, and many other places. The annual output varies much in quantity and quality, the poor qualities being mainly due to the careless handling of the fruit.

Soap is manufactured in the capital (where British interests are concerned), at Potamós, and elsewhere, these factories being often combined with the olive-oil factories. A good proportion of the soap produced is of poor quality for Eastern markets. The island used to produce some 15,000–20,000 tons annually, but Turkish export restrictions from about 1900 onwards reduced the quantity to 9,000–11,000 tons. In 1911 there was established a soap-lye evaporating factory in the capital, the products being exported for making glycerine.

Smaller industrial concerns are flour-mills, of which there are several large ones driven by steam or petroleum (e. g. in the capital, at Pérama, Potamós, and Thérma) besides numerous smaller ones. In 1905 a cotton-spinning factory was established in the capital and was capable of an output of about 2,800 yds. of cloth daily, valued at £40–£50, and since then a second seems to have been started. In addition foundries (in the capital chiefly) used some 200–400 tons of raw iron yearly, and some 20 tanneries (also in the capital), mostly small, use a good deal of the home-grown valonia and pine-bark.

Minor industries are wine-making, fishing, boatbuilding, mining, sweets and spirit manufacture, and peasant crafts. Wine, white and red, of fair quality is made, but the industry does not amount to much. Fishing is carried on in a small way all round the coasts, but more along the coasts of the mainland. Sykamiá on the north coast is a fishing village. The gulfs of Hiéra and Kalloné have also been noted since antiquity for their mullet 'sardines', lobsters, and octopuses, all prized as delicacies. Boatbuilding (sailing vessels 10–20 tons) is carried on in a small way at the port of the capital and at Potamós; the pine forests supply timber and pitch for this industry. Coaling is, or used to be, done at the port of the capital (see p. 104). In the capital are a great many minor industries—sweets and spirit-making and the extraction of oil (exported for medicinal purposes) from the wild marjoram (*rigani*; see p. 86). The peasant women all over

the island used to do a large amount of spinning and weaving, mainly for domestic purposes, but this will probably die out with the advance of modern customs and fashions, as in other islands. Silk-growing and the export of cocoons, once considerable, have declined before the onset of disease. Tiles used to be made on a site between (the southern) Mount Hágios Elías and Kalloné gulf. Mining hardly exists, though a little talc is got around Plomári, and lime-kilns and cement-works exist. (For information on mineral deposits in the island see p. 83.) The forests are not carefully handled. Many trees are destroyed yearly for their bark (used in tanning), and others are cut into deal. These trees are not replaced. The young women of Mytiléne frequently go abroad on service to Smyrna, Constantinople, or Egypt, but mostly return, and a good many of the men seek seasonal employment as carpenters and masons on the mainland.

Trade and Shipping

The trade of Mytiléne, like that of Crete, depends largely on the olive crop, for on this crop depend the oil and soap industries and consequently the wealth of the island. Thus in addition to external influences—the state of the markets, war (this latter a dominating factor since 1911), &c.—the seasons have to be reckoned with and also the degree of care or carelessness of the peasants in marketing their crops. None of these factors, however, have been so powerful as in Crete, where there were less stability and reserve if greater possibilities.

Figures are not available to show the total annual trade or the total annual value of exports and imports. The largest export (12,000–15,000 tons annually) appears to be soap, nearly all of which goes to Turkish ports. Next comes olive-oil, varying greatly in quantity and quality. A certain amount is kept in stock except after exceptionally bad seasons. The oil goes mainly to Turkish, Bulgarian, Roumanian, and Syrian ports. Valonia (about 1,500 tons annually, but sometimes as little as 450 tons) was exported to the annual

(average) value of £8,000–£12,000. Besides this a little fruit and about 250 tons of cheese are exported in good seasons.

Imports are chiefly grain, raw iron (400–500 tons annually), machinery, wood, textiles, and cattle (6,000–7,000 head annually—mules, horses, oxen, sheep, goats—for haulage or slaughter purposes). The raw iron and machinery came chiefly from the United Kingdom and Belgium; textiles from Great Britain, Italy, United States, and Germany; the cattle from Anatolia. In recent years German traders were devoting increasing attention to the island, and their trade was on the increase.

Nearly all the above trade came via Turkish (Smyrna, Constantinople) or Greek (Piræus, Syra) ports, where transshipment took place. It is not therefore generally manifested as trade with the countries of original supply.

Statistics covering the eight years 1900–7 give the following figures for the average annual shipping during those years. About 1,400 steam-vessels of 750,000 tons total capacity and 2,600 sailing vessels of 28,000 tons called yearly at the harbour of the capital. Of these about 112 steamships, representing 105,000 tons (i.e. about 13 per cent. of the total shipping), were British. The island possesses some 150 sailing vessels of its own. The Greek refugees from Asia Minor (see below) brought with them some 400 more, but these will probably go back with their owners on their return.

By far the most trade is concentrated in the capital, but Potamós, Mólivos, and other coastal towns have a little local shipping.

(For further particulars of shipping see under 'Communications', p. 106.)

POPULATION AND SETTLEMENT

Estimates of the population of Mytiléne prior to the war vary considerably. The official (Greek Government) census of 1913 gave 142,142, of whom about 20,000 were Turks and about 300 Jews. After the entrance of Turkey into the European war some 95,000 Greek refugees from Asia Minor

came to the island. Wastage by death and emigration amongst these amounted (1918) to about 30,000, so that the population at the end of 1918 was approximately 200,000. (Another estimate gives 160,000–170,000.) The refugees will probably return to their homes. During recent years foreign emigration from Mytiléne (mainly to the United States) was increasing, and in the three years 1904–6 about 3,000 left the island. This movement was checked after the acquisition of the island by Greece by the Greek military service laws. The number of Turks (given above as 20,000) has probably also largely decreased, and a recent authority numbers them now at only 4,000, of whom about 1,000 are in the capital, 1,000 in the villages east of the gulf of Hiéra (Díp, Skópelos, &c.), and 2,000 in Mólivos, Tsoukalochóri, and Sígri. These are (unlike the Moslems of Crete) mainly Turks by blood.

The settlements have on the whole a prosperous appearance. Many of the villages, owing to fear of pirates, were removed from coastal sites to hill positions less accessible, cultivation still being carried on in the fertile coast parts. The return to the earlier site has taken place in the case of Potamós and Plomári, the latter being now only a small hill-village, the former a flourishing township. The population is well distributed, and the size and number of villages in Mytiléne are surprising and indicate the fertility of the island. The villages of the south-east are the most prosperous and are similar in type. They consist usually of one main street with a few shops and cafés, and side-alleys lead off to the houses irregularly grouped on either side. The villages often occupy hill-sides (e.g. Mória and Loutrá) and show up white with their church steeples against the olive groves. The villages of the west are barer and less attractive. The houses are mostly two-storied, have tiled roofs, and are strongly built of stone, to resist earthquakes. The three- (or more) storied square towers which are still used in country parts are relics of piratical times. Sanitation and living conditions are much as usual in Aegean islands, but the water-supply is mostly good.

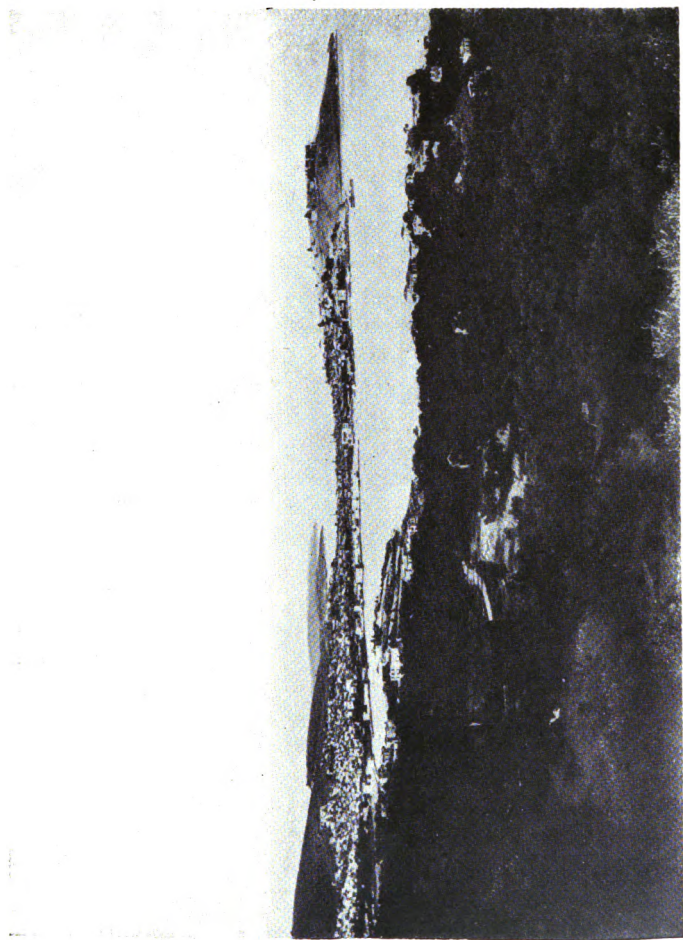
The capital, **Mytiléne** (pop. 15,000–20,000, of whom about

1,000 are Turks, Jews, and Europeans, though the number has been swelled since 1915 to about 25,000 by refugees from Asia Minor; P. T. O., C. H., quarantine station), occupies a site chosen in ancient times for its maritime convenience and its position close opposite the mainland coast. A small peninsula (probably once an island) on the south-east coast forms bays to north and south. The peninsula, cliffy on its outer faces, is mainly occupied by a mediaeval castle, which crowns it and covers with its walls most of the northern and north-western part. The town occupies the peninsula and the coastal flat and slopes west, south, and to a smaller degree north of it. The older part is on the peninsula-neck; it was mainly Turkish, and has narrow tortuous streets and some mosques. The modern town lies west and south of the wall encircling the older part and also eastwards along the road to the citadel. These parts are mainly Greek. The streets are broader, well paved, and have better houses. The chief business centres are a street crossing the peninsula-neck and one following the trend of the west coast of the south port. In the latter are the chief cafés and hotels. The southern and eastern parts are the quarters of the well-to-do, with fine houses and gardens (public and private). The western part of the town slopes up the hills and is poorer and irregular.

The town has a prosperous appearance, and owing to its partial destruction by earthquake in 1865 is well built and comparatively clean. Water is brought from two sources (5 miles and $3\frac{1}{2}$ miles distant respectively) and is stored in reservoirs near the town. These reservoirs supply the capital and the villages to the south. The position is healthy and beautiful, backed by a long line of undulating wooded hills and surrounded by olive groves stretching north and south with many gleaming villages.

Mytiléne is the administrative centre of the *nomós* comprising the island along with Lémnos, Hagiostráte, Samothráke, Ténedos, Ímvro, and the Arginoúsai Islands. Here resides the *nomárchos*, the garrison commander, the superintendent of gendarmerie for the *nomós*, besides legal, customs,

PLATE IV



MITYLÉNE : town and peninsula, looking North.

(To face p. 100)

and other Government officials. There are a bishop of the Greek Orthodox Church, a higher and other schools, a small civil and a large military hospital and other public institutions. The town has also its own *démarchos* (mayor) and municipal authorities.

Mytiléne is of commercial importance, and a British vice-consul as well as consular representatives of most European countries normally reside there. The men of Mytiléne have made a name for themselves as merchants and bankers, and industry, in which British capital was concerned, was in a flourishing state before the war. There are some 15 olive-oil factories employing steam-power, 3 or 4 of which are large; a large number of soap-factories, independent or in conjunction with the former; 3 steam flour-mills; 2 cotton-spinning mills; 2 steam saw-mills; about 30 tanneries; foundries and machine-repairing shops, though many of all these are small. A number of smaller native industries are carried on. Trade and shipping are important, and coaling can be done in the port (see p. 104). The town suffers from the lack of a good harbour. There are several good inns and a club and good steamship, telegraph, and road connexions.

Of other settlements the following may be specially mentioned:

Potamós or **New Plomári**, now mostly called Plomári (pop. 10,500, mainly Greek, P. T. O., C. H., gendarmerie), lies on the south coast about one-third of the way from the entrance of the gulf of Hiéra to that of the gulf of Kalloné. Much of it is comparatively new and has been repopulated from Plomári village, which lies among the hills inland. The town lies at the foot of a steep hill, whose sides it also mounts, and part extends up a narrow steep-sided valley leading north. It is an active industrial centre engaged chiefly in the manufacture and export of soap (some 20 factories, 2 steam-driven, many small). Milling and boatbuilding are also carried on. The town is supplied with water partly from a reservoir fed from springs in the hills and partly by wells. The harbour is very poor and exposed but is much used. The valley has

rich orange and other fruit-gardens, and the village of Plomári (P. T. O.), in a beautiful and healthy site higher up the valley, is famed as a summer resort. Potamós is connected by road with the capital.

Mólyvos (pop. about 4,000, of whom 1,000 are Turks, P. T. O., C. H., gendarmerie), the ancient Methymna, is situated on a small promontory at the north-west corner of the oblong land-block which forms the northern part of Mytiléne. The town is built round and about a hill whose summit is crowned by a castle. The hills behind are bare, but south and south-east of the town is a rich plain growing fruit (mainly figs), vines, and other products. Tracks lead across the island, but the place is rather isolated. The harbour is fair, and the boats of two steamship lines call regularly. The plain of Mólyvos is terminated abruptly on the south by a bare rocky spur, south of which lies Pétra (pop. 738, P. T. O.), a small village in a most fertile green plain, with 3 soap-factories and 3 steam flour-mills. The village lies near the coast and takes its name from a tall grey rock crowned with a chapel, which rises abruptly in its midst.

Hagiásos (pop. about 7,000, Greeks, P. O.) is a village situated at an elevation of about 1,300 ft. in the hilly country at the eastern foot of (the southern) Mount Hágios Elías, and near the watershed between the gulfs of Hiéra and Kallóné. It is built on the slopes at the head of a narrow ravine running south-west, and is separated from the marble peak of Hágios Elías by a wooded spur. The houses are built partly of wood, have tiled overhanging roofs, and water is abundant. The place is in beautiful wooded country and boasts its air and scenery, but it is chiefly important for the fine orchards which lie in the vicinity (growing apples, pears, cherries, quinces, &c.) and for the festival (resembling that of Ténos, with miracles and cures) which is held in the church every August. The village is connected with the capital by a road leading past the head of the gulf of Hiéra.

Mandamádos (pop. about 3,600, Government telephone office) lies in a broad, flat, and stony valley in the north-east

(east of Makré bay), some height (alt. 450 ft.) above and out of sight of the sea. It has several oil-presses and possibly a soap-factory, but it is chiefly noted for the ancient image in its church, which is an object of pilgrimage and awe. Mandamádos is a good instance of the removal inland of villages, and it has *skálai* (small ports and landing-places) on the bays to the south-east and north-east of it. These places can be reached only by tracks across difficult and stony hills.

Other villages may be mentioned more as types of settlement than because of their importance. Kalloné is the collective name given to the group of agricultural and fruit-growing villages, e.g. Parákoila (P. O.), Achyrón (P. T. O.), which cluster in the rich lowlands around the head of the gulf of Kalloné. There are several mills in the district, and the Greek Orthodox bishop of Methýmna (Mólyvos) district—formerly an archbishop—lives at Achyrón, where there are also a convent and a monastery. The population of the district probably amounts to some 9,000. Typical of north-western villages are Tsoukalochóri, Telónia, and Stýpsis, each with some 2,000–3,000 inhabitants, and situated amidst stony hills (which are here covered with valonia forests) but having access to fertile valleys. A similar village in the south-west is Eresós (pop. 3,250, P. T. O.) placed amid stony hills but with a fine fruitful valley-plain below it growing corn, figs, vines, &c. Polychnítos (P. T. O.) in a desolate region south of the gulf of Kalloné is noted for its mineral springs; it also has a steam-driven oil-press. Villages such as Mória and Panagióúda may be taken as typical of the east-coast olive district, while Thermé (farther north and inland a little) is noted for its warm medicinal springs. Finally should be mentioned the prosperous villages ranged about the gulf of Hiéra, those at the north-west (Díp, &c.) going by the collective name of Hiéra (P. O.). Pérama on the western bank of the inner part of the entrance channel is a flourishing village with two large steam oil-presses, a steam flour-mill, a small pier, and a boat camber. The village is of importance because of the ferry (*pérama*=ferry or ford) there, which is used by most of the villages to the west of the

gulf as the most direct route to the capital. The road from Potamós (Plomári) to the capital goes via Pérama. In the hills above (west of) Pérama is the prosperous fruit-growing village of Skópelos (pop. 3,800).

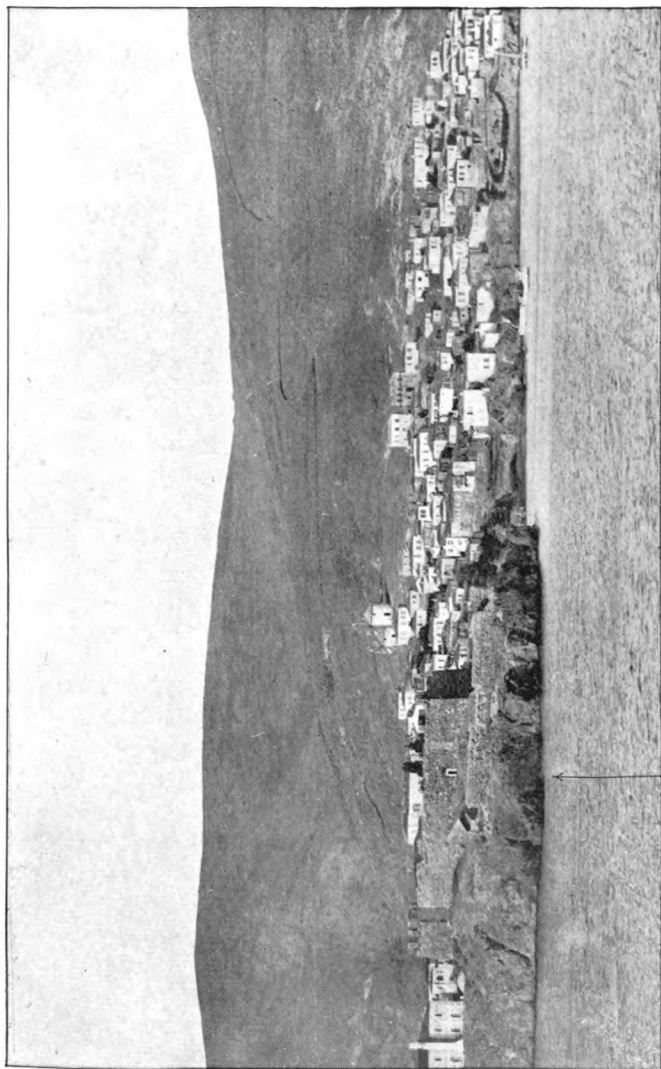
PORTS AND HARBOURS

The island is not well provided with harbours useful for its own trade, though Sígri on the west is an important naval point in the Aegean.

The capital has two bays capable of serving as ports. They are formed by a peninsula projecting eastward. The northern port is the larger and is partly sheltered by a pier running north-west from the peninsula below the fortress. But the shore in many places is rocky, and the bay has 2–5 fathoms. It is partly exposed from the north-east, the direction of the prevailing winds, and seems gradually to be sanding up. It is little used. The south port, though shallower ($1\frac{1}{2}$ –3 fathoms), is more sheltered and has two moles covering the entrance and a quay encircling the water with 3–4 ft. of water alongside. This port is generally used by small sailing craft, but landing on the quay (which is 4 ft. above water and has no steps) is difficult. Large craft anchor in 10 fathoms off the town farther out. This is an exposed position, and in bad weather the large regular mail-steamers merely slow down without stopping, and even in better weather landing from open boats is difficult, in spite of the skill of the boatmen. There were before the war a steam tug, several motor boats, about 20 lighters, besides smaller boats in the port. There is a coaling wharf (30 ft. long, 12 ft. of water alongside), and about 3,000 tons of Heraklea coal used to be and perhaps is still kept in stock. Water and food can be had in abundance, and there is a small shipbuilding yard, where small repairs could probably be executed. Quarantine is performed in the harbour.

Port Sígri is the best harbour. It is formed by an oblong bay in the extreme west coast sheltered from the north and south by projecting headlands and from the west and south-west (partly) by a long curving rocky island. The chief

PLATE V



The Citadel.

SIGRI, looking East. (Taken 1907).

Ordnance Survey, March, 1919.

(To face p. 104)

entrance is from the south-west, but there is also a narrow passage leading out north-west with only $2\frac{1}{2}$ fathoms. The harbour within is commodious, secure in almost any weather, and has 7–15 fathoms over a mud bottom. On a rocky peninsula projecting from the east side of the bay lies the small village of Sígri (pop. about 1,000, nearly all Turks, P. T. O.) with an old fortress and a mosque, remote from anywhere and backed by stony hills. There is a small pier. Sígri harbour is conveniently situated for shipping making north-east or south-west, to and from the Dardanelles, and is much frequented in winter storms. It has been used by the British fleet.

Port Hiéra (see p. 78) is landlocked and sheltered, has 7–10 fathoms, ample accommodation, and good holding-ground. Unfortunately its entrance is narrow and tortuous and beset by sand-banks and shoals, and in southerly winds the entrance is dangerous. Sailing craft also have to reckon with the current in this channel, which is said to set strongly outwards and inwards, changing every 12 hours. Within the gulf Pérama, with a small pier, is used locally as a port for crossing to the east bank by the villages to the west.

Port Kalloné (see p. 78) is larger and less sheltered than Port Hiéra, has 4–10 fathoms over a muddy bottom, but its entrance is restricted (near the mouth) by a large rocky bank which leaves for $\frac{1}{2}$ mile a passage only 70 yds. wide and 14 fathoms deep. If this were buoyed, it could be used by large ships. On the northern side of the entrance to Port Kalloné is a sheltered bay affording good but limited anchorage in 6–10 fathoms. There are a village, pier, and custom-house here.

Mólyvos, with its promontory projecting westward, offers an anchorage in 10–20 fathoms but exposed to the south and west and suffering from a swell in north and east winds. Coasting steamers regularly use this harbour.

Other bays, such as that of Pétras just west of the entrance to Hiéra gulf, afford temporary and limited anchorage, while Potamós, which has no good harbour at all, yet does a fair trade.

COMMUNICATIONS

Prior to 1914 the Austrian Lloyd steamers used to call regularly at the port of Mytiléne, weather permitting. The Khedivial line, plying between Constantinople and Alexandria, used to call weekly, besides other coasting lines running between Constantinople and Smyrna. Besides these, five Greek island or coasting lines kept up a constant communication with Piræus, Vólo, Smyrna, Kavalla, and Salonica, as well as with Chíos and Sámos. Two steamship lines, plying between Constantinople and Smyrna, called regularly at Mólivos. Sailing craft could also be found for any of the adjacent islands or mainland coasts.

Two submarine cable lines—the property apparently of the Turkish Government—connected Mytiléne with Aívali (Asia Minor) and Chíos respectively. They were landed, the former near the capital, the latter at Potamós, but neither was working in 1915. Near the capital is a wireless station capable of communicating with Chíos, Lémnos, and Syra.

There are post, telegraph, and telephone offices at Sykamiá, Mólivos, Pétra, Sigri, Eresós, and at Hiéra, Plomári, Potamós, Polychnítos, Kalloné, and at the capital. The lines joining these places probably encircle the island, but it is also possible that one line goes from the capital northward and westward as far as Sigri, and the other south-west to Kalloné. There are also telephone stations at Mandamádos and Pámphylla (northwards from the capital). The telephones appear to be for official use only.

There are better roads in Mytiléne than in most Aegean islands. These were first constructed (about 1890) by a foreign engineer officer serving in the Turkish army, but owing to earthquakes and neglect they fell into serious disrepair. From 1900 onwards, however, a good deal began to be done in the way of making new roads, repairing old ones, and building or repairing bridges. Of recent years also a large sum has been spent with the same object, and as far as they go the roads are good. Such as are still poor could be made suitable for

ordinary traffic at no great expense. Bridges are mostly of stone, and they are common on all routes. Gradients are nowhere excessive, though there is little level going. Transport is by means of mules, asses, and ponies, but there are also some rough four-wheeled carts.

Route 1.—Mytiléne-Mólyvos (32 miles approximately).

This is the longest continuous road in the island. It is metalled, 15–20 ft. wide, and kept in fairly good repair. It leaves the capital north and follows the coast north for about 2 miles. Here it bends sharply south-west, passes through Mória (pop. 2,047), and crosses the chain of wooded hills by easy slopes, descending to Thérma (mile $5\frac{1}{2}$) on the north-west shore of Hiéra gulf. At Thérma there are hot springs.

From Thérma a branch road leads west across the head of the gulf and mounting the hills to the west leads WSW. with many curves and large bends through hilly wooded country to Hagiásos (mile 14 from Mytiléne; see p. 102).

From this branch road in turn a track branches south from near the north-west corner of Hiéra gulf and leads to Pérama (see below, Route 3, mile 6).

(Note.—An alternative road to Thérma leaves Mytiléne south-west and crosses the ridge in a westerly direction, reaching the shore of the gulf of Hiéra between Thérma and Kédros villages, there being a short branch road to the latter. This alternative road is shorter and good for wheeled traffic, though the gradients are steeper than on the route via Mória. It is little used.)

Road leaves Thérma. The first 150 yds. after Thérma are very bad. It mounts a valley to the high pine-clad plateau north-west of Hiéra gulf. This it crosses, with many bends and ups and downs, in a general north-west direction, descending gradually among stony hills to near north-west corner of gulf of Kalloné (about mile 20). Reaching the flats at the head of the gulf it goes WNW. to Achyrón (pop. 2,520, mile 25). Probably this latter portion of the road is double, one way curving north around the salt marsh and keeping close under

the hills to north; the other crossing the narrow outlet of the marsh by a bridge and keeping west close along the shore to Papianá, thence bending north-west to Achyrón.) From Achyrón road mounts steep hills north and crosses high broken country with numerous ups and downs to Pétra (see p. 102) on north-west coast (mile $28\frac{1}{2}$). Thence road crosses rocky ridge north and keeping north through coastal plain to Mólivos (mile 32).

Route 2.—Mytiléne to Mólivos via Mandamádos (27 miles approximately).

This is also a fairly good metalled road as far as Mandamádos. After that it is a mountain track across difficult hill-country with numerous valleys and bare ridges.

As far as mile 2 same as Route 1. Where Route 1 branches off south-west, road keeps northwards skirting coast through olive plantations and cultivation, passing through several villages. At about mile 6 a side-track leads south-west to Thermé, where are medicinal hot springs. Road keeps NNW., following in general the coast. At about mile 10 (Kydóna village) road leaves olive country and enters country of bare stony hills. Keeping north-west along coast to head of Makré bay, road mounts hills north to Mandamádos (alt. 460 ft., mile $18\frac{1}{2}$; see p. 102). From Mandamádos a track leads west across hills (1,017 ft.) and bends north-west to Géloia (pop. 1,570, alt. 1,017 ft., mile 15); thence WNW. to Hypselométopon (alt. 1,150 ft., mile $17\frac{1}{2}$); thence south-west to Stýpsis (pop. 2,930, alt. 1,033 ft., mile 20); thence descending valleys to Pétra (mile $23\frac{1}{2}$), where it joins Route 1 (see Route 1, mile $28\frac{1}{2}$), and goes to Mólivos (mile 27).

Route 3.—Mytiléne—Potamós (Plomári; 20 miles approximately).

This is mainly by road, but there is a water-gap, crossed by a ferry, in the middle. The road to Pérama is 15–20 ft. wide, metalled, and kept in good repair.

Road leaves town south-west and mounts through beautiful olive and other gardens south-west, with many curves, the

hill chain west of the town. The descent on west to gulf of Hiéra is steeper and has some sharp bends. Road approaches shore of Hiéra gulf at about mile 3. Thence it skirts shore south to south-west corner of gulf, where it leaves shore and crosses col to Loutrá (pop. 1,740, mile 5). From Loutrá road descends valley south-west to shore of bay on east side of entrance channel to gulf. From here a ferry connects with Péráma (mile 6; see p. 103). From Péráma road crosses cultivated plain west and mounts hills. Through beautiful high hilly country mostly clad with olives and pines road goes WSW. and descends to west coast, shortly afterwards reaching Potamós (mile 20; see p. 101).

Route 4.—Mytiléne-Sígri (39 or 53 miles approximately).

As far as Achyrón (see Route 1, mile 25) this is the same as Route 1. From Achyrón two tracks go westwards, one via Eresós, the other via Telónia, to Sígri.

The former ascends first west inland and then descends to Parákoila (mile 32), a village in a rich cultivated plain on west shore of gulf of Kalloné. Thence a track mounts rough hill-country, passing by Ágra (alt. 1,115 ft., mile $36\frac{1}{2}$), to Mesótopos (mile 41) and thence, keeping more or less parallel with the coast and 2 miles inland, to Eresós (mile 46). (From Eresós a track, partly road, leads north ($5\frac{1}{2}$ miles) over hills 1,260 ft. high to Telónia (see below).) Thence, following trend of coast round west and north-west and approaching closer to shore, a rough track to Sígri (mile 53).

The northern route leads in a generally west direction over a region of stony hills to Telónia (pop. 3,200, alt. 820 ft., about mile 30). (From Telónia a rough road leads south ($5\frac{1}{2}$ miles) to Eresós.) Thence two mountain roads lead west, one north and one south of Mount Orthymnos, and bending south-west reach Sígri (mile 39 approximately; see p. 104). Both these roads (from Telónia to Sígri) are metalled but in bad condition. The one on the north of Mount Orthymnos is the better and descends by a valley to the coast. The more southerly is shorter but leads across difficult hills.

In addition to the above routes there are two roads, both short but metalled and in fair condition leading south from the capital, one more inland to the village of Áno Chályx and the other along the coast to villages farther south. There are besides numerous tracks, of which that leading WNW. to Polychnitos from Potamós may be mentioned.

CHÍOS

(WITH OINOÚSAI ISLANDS, PSARÁ, AND ANTÍPSARA)

PHYSICAL FEATURES

Chíos lies close off the peninsula of Karaburun (ancient Klazomenai), which roughly marks the middle point of the western coast of Asia Minor. Though not so favourably situated as Sámos with regard to Greece, from whose rather closed eastern flank (Euboea) it is separated by an open sea 80–90 miles broad, it is in a commanding position with regard to the mainland coast of Asia Minor. The island has the appearance of being a fragment of the peninsula of Karaburun, and this surmise is supported by geological evidence as well as by the narrow and partly rock-strewn channel which divides the two land-masses. Chíos strait, as the channel is called, has on the south an entrance not much more than 4 miles wide, and near the middle two rocks practically divide it into two channels. Farther north the strait is wider—opposite the town of Chíos about $7\frac{1}{2}$ miles—but the northern gap between Chíos and the mainland, though it is 11 miles broad, is spanned over a great part of it by the Oinoúsai (Hagnoúsai or Spalmatori) Isles, which leave between themselves and Karaburun a passage of $4\frac{1}{2}$ miles and between themselves and Chíos one of over a mile's breadth, the latter with two rocks near the middle of the entrance from the south.

Chíos lies within the 100-fathom line which skirts the coast of Asia Minor. The shallowest water is on the east, Chíos strait having 30–45 fathoms over the greater part of it, though the southern entrance has depths of 10–15 fathoms,

and the north-eastern exit 15–20 fathoms. Even on the east the submarine slope is steep, and depths of 20–40 fathoms are registered in most places within a few cables of the shore. The same applies to the north, west, and south coasts, with the additional feature of a rapid sinking (on an average 2 miles from the shore) to below 100 fathoms.

The island has an elongated curving shape, concave towards the west and resembling curiously the general shape of the mainland peninsula east of it. The southern part most resembles a segment of the broad rim of a wheel, but at the north is a nearly rectangular block. The extreme length (north to south) is just over 31 miles; the extreme breadth (in the north part of the island) is a little over 18 miles (east to west), the breadth across the southern part being about $13\frac{1}{2}$ miles, and in the middle (opposite the capital) only 8 miles. The area is 320–330 square miles.

Apart from the great bay—11 to 12 miles broad (north to south) and about 5 miles deep (west to east)—which bites into its western side, Chios has few striking coastal indentations. The shores of the bay mentioned are carved out into numerous small inlets, two of them—one on the south, called Mestá, and the other about the centre, named Halóúntos bay—being fiords about 1 mile long and $\frac{1}{2}$ mile wide. The other inlets are more open, and all are separated by bold promontories very much like one another. Near the north-east corner of the island are two inlets, each with two arms. That which faces north consists of a rounded bight, from the south-east corner of which two inlets penetrate each about a mile SSE. inland. The more westerly and larger is called Port Mármara and is separated by a high rocky tongue of land (continued at a small distance north by an islet) $\frac{3}{4}$ mile broad from the eastern inlet, Parápanta bay. The whole bight is framed in on the east, and at a greater distance on the north-west, by prominent rocky headlands. The second inlet of the north-east lies on the east coast about midway between the capital and the north-east point of Chios. Of its two arms the one to the north is an oblong bay open to the east, about $\frac{3}{4}$ mile

wide, runs inland (west) about 1 mile, and has smaller coves at its north-west and south-west corners. The more southerly opening consists of forking inlets piercing the land about 1 mile in a south-west and SSW. direction respectively. The mouth of this inlet faces that of the northern one, and the whole is known as Kolokythiá ('Gourd') bay. Apart from two curving bights—Megálo and Kalamoté—on the south-east and several small open bays on the south-west, there are besides the above only small coves. The south-west and west coasts of Chíos are almost entirely cliff-bound, with high conspicuous bluffs and capes. On the north and north-east also the coast-line is rocky with frequent stretches of cliff. The eastern side is the lowest, though it also is mostly steep, and in places (e.g. about Cape Hágia Heléne 2–3 miles south of the capital) it is bold. Low sandy stretches of any size are rare, the chief being north and south of the capital and opposite Volissós (north-west). There are several off-lying rocky islets and reefs (e.g. north-east of Mestá bay; near Mármara and Kolokythiá bays; a conical islet (Stróvilos) at the north-east corner and another conical rock about 1 mile off the extreme south point).

Chíos is traversed from north to south by a range of high and on the whole bare mountains, whose irregular sharply undulating profile is most clearly defined when seen from the east. The striking and rugged character of this chain earned for the island its ancient epithet 'rocky'. This range is not a single chain but rather a series of broken chains—sometimes, as in the north, forking, at other times parallel (e.g. towards the south and centre)—running from the extreme northern to the extreme southern point. The range is highest in the north, the highest point of the island, Mount Hágios Elías (4,157 ft.), lying only 3 miles south of the northern extremity. Mount Hágios Elías is conspicuous from the north, from which direction it appears as a cone; from the west it is seen to consist of twin peaks, both sharp and pyramidal, and the whole is girt about with precipices. The range which runs towards the centre of the island sinks somewhat but

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PLATE VI



CHIOS : typical upland scenery.

(To face p. 118)

remains high and sharp-featured ; its north-western flank is steeply escarped, and westwards from the capital, where there are summits of 2,750–3,150 ft., the eastern face is craggy and in places presents great cliffs. Southwards the heights go on sinking (2,330–1,650 ft. westwards of the Kámpos), while in the southern parts they are only half that height (e.g. the height close above Cape Mástico, the extreme southern point, is 690 ft.). The main range fills with its spurs, slopes, and uneven side-plateaus nearly the whole of the rest of the island. In particular the north-east corner is high and bold with eminences reaching 1,000 ft. West and south of Kolokythiá bay is a rough plateau (average elevation 1,310 ft. but with heights reaching 1,800, 1,476, and 1,443 ft.) which pushes out to the east coast south of the bay mentioned. In addition the south-west corner of the island is occupied by high land formed by the spreading spurs and flattened heights of the main range. The north-west and south-east portions of Chíos are somewhat distinct and of different formation. The whole of the north-west region—forming the large rounded promontory projecting west—is composed of soft-featured rolling hills and spurs, while the south-east portion is also an irregular and low hill-land.

The only large plain is that called Kámpos, which curves south and south-west from the capital. It extends as a narrow strip some $2\frac{1}{2}$ miles southwards from the town and then, bending south-west and west, expands to a width of 1–2 miles and stretches about $3\frac{1}{2}$ miles inland. It is surrounded by low hills, and the parts behind the capital are broken and hilly. There is another small plain in the north-west, bordering the shore south of Volissós and stretching about $1\frac{1}{2}$ mile inland. The only other low ground consists of small patches at the mouths of some of the valleys opening on the north coast (e.g. the plain of Kardámyla, opening on Mármara bay).

There are no large streams. From a deep forking chasm in the mountains west of the capital a winter torrent issues and has worked a tortuous course, with numerous side-glens, amid

the lower hills. The ravine is deep and has rugged and steep sides ; close west of the capital it bends south-east, and the mouth lies about $\frac{1}{2}$ mile south of the town. The plain of Kámpos is drained by a fair-sized stream flowing north-east and emptying into the sea a little south of the preceding. Other torrents in the north, north-east, and south-east have long valleys, mostly amid wild country. The streams of the north-west have the softest-featured valleys, and their beds mostly contain some water even in the height of summer. Elsewhere the watercourses are dry in summer, but there is plenty of fine springs, and water can usually be got by digging.

GEOLOGY, &c.

The basis of Chíos consists of old schists—mainly greywacke and argillaceous schists—containing thin layers of limestone folded with them. These schists appear to the greatest extent in the north-west, stretching from just south of Volissós bay to the north coast opposite and occupying the whole of the north-west promontory. They account for the soft rolling character of the hills and the comparative fertility of the valleys in that region. Other patches occur : in the valley depressions of the north coast as far east as the Kardámyla valley ; immediately behind (west of) the capital, where they form the lower hills between the coastal plain and the limestone heights ; and in one or two small patches in the south-west. Above these schists lies in many parts a thick layer of old red limestone, alternating to a considerable extent with schists (argillaceous and green talc schists), conglomerates, and hornblende. Above this layer lies an immense covering of coarse grey chalky limestone. This last forms by far the greater part of the surface of the island, from the north coast (except the western part) stretching down through the body of the island and covering all the south-west. Of this rock are composed all the principal summits and nearly all the higher parts of the island and hence their barren appearance. The last and latest formation of Chíos is the strip (3–5 miles

wide) of Tertiary rocks which runs from Kámpos plain to the south coast. This area, consisting of softer irregular hills, corresponds to the north-west schist area in fertility. This formation stretches in a narrow strip along the coast northwards for 3-4 miles beyond the capital, and comes to an end at the so-called 'School of Homer'. The plain of Kámpos and the coastal parts around the capital are formed of alluvial deposits from these Tertiary rocks.

Minerals occur in the northern part of Chíos. In a valley called Kéramos opening on a small bay called Hagiásmata (on the north coast rather towards the west) antimony glance occurs in rich veins and pockets in the greywacke. In a neighbouring valley to the east zinc ore is found. Manganese ore is said to occur in conglomerates on the north slopes of Mount Hágios Elías near the coast, and southwards from Kardámyla, near the border-line between schists and limestone, is a large outcrop of red iron ore. Copper is also said to occur. The old red limestone of Chíos makes good pavement-flags.

There are no hot springs, but Chíos is subject to earthquakes. Frequent small disturbances are recorded (e.g. two fairly strong tremors on July 10, 1901), but the greatest in recent times occurred in 1881, when practically the whole of the capital and many of the villages were destroyed, and many people were killed (see p. 119). The movement seems to have been local and was not felt much outside the island, and within Chíos some villages were hardly affected.

No detailed information is available for the climate, which is reported mild. (See also note on 'Climate', p. 177.)

Chíos was once well wooded. The middle slopes of the limestone mountains retain a fair amount of pine woods (e.g. west of the capital). Patches of pines occur in the northern parts also. On the limestone plateaus is phrygana and other scrub, and the valleys are also scrubby. Planes grow in the better-watered valleys, and the trees of cultivation, including the mastic bush, give the south-western parts a green and pleasing appearance. The mountains and hills have a barren appearance, but the valleys are mostly soft and green.

HISTORY AND INHABITANTS

Chíos no less than Sámos was conveniently situated for exploiting the trade of the Asiatic mainland opposite. Due east of the island is the gulf of Smyrna, the outlet of the ancient Hermos, whose trading port was Phokaia. It is characteristic of the spirit of these ancient Greek states and of commercial rivalry generally that neither of the two important islands was on friendly terms with its neighbouring mainland town, but Chíos, allied with Miletus, was the bitter rival of Sámos, which was linked with Phokaia. The activities of both groups were similar and aimed at exploiting the rich valley hinterlands and trading the products (raw or manufactured) with the Black Sea settlements, Greece, the far West, and the Levant. The islands of Chíos and Sámos did the carrying trade. Even in those early days Chians showed a capacity for orderly self-government. The island passed through the usual political evolution, but excesses seem to have been avoided, and the island had for many centuries a peaceful and somewhat obscure history as a trading community. An honoured and democratic ally of Athens, it was later accorded special privileges by the Romans, and this state of semi-independence it maintained into Byzantine times. It was chiefly famed for its export of wine, a product apparently of the north-western district; its commerce and industry were also notable.

In the eleventh, twelfth, and thirteenth centuries it was subjected to temporary occupations by the Saracens and the Venetians, but reverted on each occasion to the Byzantine (Greek) empire. In 1346, however, the Genoese state conquered it, and the private individuals who had furnished the funds for this undertaking were granted by the Genoese Government the rights and status of a private trading company or *maona* (cf. the East India Company). The original company was soon superseded by another, and this latter continued to exist till 1566. The Giustiniani, as the company was called, proved on the whole satisfactory masters. They exploited

the mastic trade and mined alum on the mainland (near Phokaia), but they left to the Chians a good deal of self-government and right to pursue their own industries. Their dispensation was not severe, and they gave security in troublous times. Later, owing to subdivision of the shares and the increase of officials, the burdens became heavier.

In 1414 the island was captured by the Turks, but the Giustiniani were allowed to remain. During the fifteenth century the islanders several times tried to throw off the Turkish yoke, but it was not till 1566 that the Turks finally annexed the island, and it was called by them Sakiz Adazi ('Master Island'). The Turks on their part granted to the Chians a special privileged position. A charter of 1578 granted them local autonomy under the supervision of a resident Turkish governor; religious liberty; freedom from the tithe and restriction of the number of the Turkish garrison and Turkish residents. The only reservation was the mastic crop, 25 tons of which were reserved as a special tribute to the Sultan, the rest being generally appropriated by the official collecting. In spite of various calamities, such as the capture of the island by the Florentines and its subsequent recapture by the Turks (1595), and a similar affair with the Venetians (1694-5)—after both of which events the foreign element particularly suffered—Chíos began to increase in wealth and prosperity.

The heart and soul of the Chian community was the *Demogerontia*, composed of five members popularly elected every year with solemn formalities from among the elders and notables of the capital. The office of *demogerontes* was held in the highest honour and was unpaid. For certain purposes the council of five was aided by committees of 10 or 15 ex-members. The council had supreme *de facto* control of administration, justice, and taxation, and kept in addition an eye upon public and private morals and expenditure. Their rule seems to have been just, democratic, and equitable. The Turkish officials—the *mouselim*, who was responsible for the imperial taxes (the capitation and two other minor taxes),

and the *cadi*, or criminal judge—had only nominal power. By the end of the eighteenth century Chíos had a large mercantile fleet, consuls in many European capitals, a famous school, library, laboratory, and hospitals, and was noted throughout the East as a centre of free Hellenism. The great exception to the general prosperity were the ‘mastic’ villages of the south-east, which remained in a state of obscure and impoverished semi-slavery under the heel of the imperial due-collector (*sakiz emini*). Towards the end of the eighteenth century Chian liberty began to be curtailed and their privileges encroached upon.

Upon the outbreak of the Greek War of Independence the Chians at first took no part and did not arm. But a band of Samians landing in the island fired the excitable islanders, and a few of them proclaimed revolt. The opportunity was seized by the Turks, who, as a set-off for their ill success elsewhere, wished to make an example. The defenceless islanders were overwhelmed and massacred without mercy: all men and old women were slain and the rest of the women and children sold into slavery. It is estimated that 25,000–30,000 perished, and some 40,000 more were enslaved; 3,000 refugees were slaughtered in the monastery of Hágios Menás and 2,000 in that of Néa Moné. This crime was one of the events which evoked public sympathy in Europe against Turkish oppression. Only a few thousands of Chians remained alive after 1822, but the survivors were granted an amnesty and invited back two years later. At the end of the War of Independence Chíos remained with the Turks, and an imperial Ottoman edict in 1832 restored to the Chians their property confiscated during the war, and the payment of the tithe was again abolished. As a measure of conciliation also the *Demogerontia* was revived and gradually rose again to something of its old power. Even Moslems sought its protection against their own authorities. Moreover the ‘Ephor’ of Chíos at Constantinople prevailed sufficiently to make, unmake, or cow Turkish governors in the island. The law reorganizing the Turkish *vilayets* put an end to this state of affairs in 1866,

and the *Demogerontia* was shorn of its powers, which were assumed by the Turkish governor (*mutessarif*). Nevertheless the island continued to increase in prosperity; Greek always maintained itself alongside Turkish as the official language, and in 1869 the exemption from the tithe was officially confirmed.

The next great blow from which the islanders suffered was the great earthquake of 1881. From 4,000 to 5,000 people were killed, about 40,000 more were rendered homeless and destitute, and enormous material damage was done to agricultural property, cattle, and the capital and villages. The capital was laid in ruins, and many of the villages were destroyed. From this blow the island has not yet recovered.

During the latter part of the nineteenth and the early part of this century Chíos has again steadily risen in prosperity in spite of heavy taxations and dues. In 1912 Chíos was occupied along with most of the other north-east Aegean islands by the Greeks and conditionally granted to Greece in 1913 by the Great Powers. The island now forms, along with Psará and the Oinoúsai group, a *nomós* of the Greek kingdom and is administered by a *nomárchos* resident in Chíos, where is also a Greek bishop. The *nomós* of Chíos sends 7 deputies to the Athenian Chamber; 2 of these deputies are from Psará.

The Chians had probably a good deal of Latin blood in their veins, but after the massacre of 1822 the island was repopulated mainly from Greece and Asiatic Turkey. The climate is mild and reputedly very healthy; malaria is rare, though leprosy is endemic in the north-western parts (*Volissós*). The people are lively, nimble of mind and body, ingenious, and sensitive to new ideas and influences. They are fond of learning and education, courteous in manner, shrewd and enterprising in business. They have also the defects of highly sensitive natures. They are poetical and romantic and also somewhat light-headed, hasty, and unpractical. They tend easily towards foppishness and effeminacy, and they are considered unreliable and cunning in dealing, pliant and submissive in character. Yet they have displayed a great

capacity for orderly self-government; they are peaceable, industrious, and frugal. The succession of heavy blows from which they have suffered has not discouraged them, and they have a future, if not as statesmen, as traders and manufacturers.

The Chians are now almost all Greek Orthodox Christians; their educational institutions are of a high order, and the standard of living and comfort among them is comparatively high. Their houses display artistic taste and refinement combined with a sense of the practical and useful.

INDUSTRIES

Agriculture is the most important occupation, and the manufacturing industries are mostly closely connected with it. A small amount of cattle-rearing and fishing is carried on; trading occupies a large place in the life of the capital; and mining has also been attempted. The island has also a small mercantile marine.

Agriculture, Pastoral Pursuits, Fishing

The principal objects of agriculture are fruit, mainly oranges and lemons, almonds, grapes, and figs. The olive, mastic shrub, and tobacco are also cultivated, besides a certain amount of corn, vegetables, pulse, &c.

The largest fruit-growing area is in the vicinity of the capital, particularly the narrow coastal plain stretching southwards from it and the larger plain, Kámpos, lying west of Cape Hágia Heléne. In this part are numerous fine gardens, and the Kámpos is a forest of orange, lemon, and almond-trees, amongst which gleam the white belfries of chapels and scattered homesteads. The gardens are enclosed, in Italian fashion, by high stone walls. The hills and ravines immediately west and north-west of the capital, though rough and steep-sided, are also industriously terraced and utilized wherever possible. The orange crop at times (e.g. about 1902-3) is seriously affected by disease and fluctuates

greatly, as does also the almond crop, which may suffer from cold or violent winds.

Southwards of this area stretches to the bight of Kalamoté the Tertiary hill-country which has become famous as the home of mastic cultivation. The whole district is named after this product, and the twenty odd villages engaged in the cultivation have come to be called Mastichochoriá. The shrub has been tried elsewhere but thrives only in the yellow sandstone and white clay of this region. It is a cultivated variety of the *Pistacia Lentiscus* L. (var. *chia*) and does not grow wild. The plant grows in small copses, 6-7 ft. high, with a bushy crown. Incisions made in the bark of the twigs emit a pearly or greenish gum, which falls on the ground and hardens. A shrub yields 5-8 lb. yearly, decreasing with the age of the plant. The harvest lasts from spring to August. The gum is used in making *masticha*, the favourite liqueur of the Greeks, and is also eaten pure or used as a flavouring. In Turkish days the tribute of mastic went to the Sultan's harem.

In ancient times the north-west district of Chíos was noted for its wine. Modern Chian wine is rich and fiery. The valleys in this region and those which open in succession along the north coast as far as the valley of Kardámyla grow vines, and have all small but rich cultivated plains. Similar plains exist at the head of Kolokythiá bay (north-east), and a much larger one with vineyards due west of it below Volissós. Carobs grow well on the hills around Kardámyla. Fairly large olive groves are found in the eastern parts, especially around the capital. Pepper-trees grow round the houses, which are also often surrounded by gardens of other fruit-trees. Tobacco was not introduced until 1909, but the island product was found to be of first-class quality, and the cultivation is rapidly spreading, and tobacco will perhaps become one of the most important products. The island also produces a certain amount of aniseed. Sufficient grain is grown only for two months' consumption.

In the more barren parts of the island (i.e. in the south-west,

centre, and central north) a certain amount of live-stock (cattle and goats) is kept, and in the northern parts pigs teem in the villages.

Fishing is carried on from the villages of Vrontádos (2½ miles north of the capital), Mármara (on the bay of that name in the north-east), and perhaps at other places around the coast.

Manufactures and Mining

The last decade of the nineteenth century and the first part of this have witnessed the rise of Chian industry. The most important before the war was tanning, which employed many workmen; there are 25 tanneries, 12 of them in the capital, 5 of them worked by steam. Raw hides, valonia, pine bark, and chemical dyes are imported for the purposes of this industry, and dressed leather is one of the chief exports. Heavy harbour dues and taxation put the Chian tanning industry early in the present century at a disadvantage as compared with that of Sámos, and the advent of the Turko-Italian and Balkan wars also seriously affected it. There was thus a great 'slump' about 1910-12, but by 1914 there was a recovery.

Closely connected with the above is pine-bark and valonia-grinding. This was formerly important, the raw products being mainly imported and ground in several steam-worked mills. The ground products are used in the island for tanning, and the surplus is exported. Since the advent of imported chemical tanning materials this industry has fallen off considerably.

Olive-oil of good quality is manufactured by some 15 presses, several of which are steam-driven, and one in addition makes soap. Milling is also fairly important. There were (1907) 4 large steam mills making flour and macaroni, and 2 of those in the capital grind some 20,000 sacks of flour per annum. Milling is also done by windmills. More important perhaps than flour-milling are the mastic-mills and spirit-factories. There are 5 steam and 10 windmills in the capital

devoted to this industry. In addition to the above there are two fairly well-equipped foundries and machine-repairing shops in the capital, and a spinning mill, which makes fleshings. Pottery and tiles are also made.

The only mining which has so far been attempted was for antimony. The workings (there were two) lay on a hill-spur which pushed out between two converging valleys a little south of Kéramos. This village is situated on the west slope of the valley opening on Hagiásmata bay on the north-north-west coast. The manager's offices and the smelting works were situated in the valley beneath Kéramos, and on the bay were the storehouse for the mineral and the manager's private dwelling. The mines belonged to a Greek, by whom their working was let to French contractors, but in 1901 work had been suspended. It would appear that neither this nor any other of the mineral resources of the island (see p. 115) has since been exploited.

Trade and Shipping

Chíos has since the earliest times had a relatively large sea-borne trade, and throughout all the vicissitudes of her history this trade has either maintained itself or shown a power of rapid recovery. The Chians are enterprising, accustomed to rebuffs, and quick and adaptable. Nevertheless the almost complete annihilation of her population in 1822 and the earthquake of 1881 were disasters from which the island has never really recovered. More recently, during this century, Chíos has had to contend with Turkish rule with its concomitants of heavy harbour dues (levied by a quay company), taxation, and emigration of the flower of her manhood; a severe financial depression lasting from 1906 to 1908, in which four commercial bankruptcies represented a loss of over £50,000; fruit and other diseases; and finally the Turko-Italian and Balkan wars, which closed her chief markets and sources of supply. Chíos was therefore at a great disadvantage as compared with her ancient rival, Sámos, which

enjoyed comparative freedom and peace, and much of the Chian carrying trade, done in her own bottoms, was lost to Smyrna and Mytiléne. In spite of this, Chian trade and industry kept its head up, and, though the returns for the years 1907–12 show a relative decrease, there have been on the whole a steady, though fluctuating, rise and a stabilization due to the encouragement of more varied resources (e.g. tobacco) and improved methods. Chian trade too has gradually gained wider connexions: there is an increase of European and American as contrasted with purely Levantine trade, and before the war Chíos was recovering the trading repute she had in mediaeval times. (See p. 117.)

The figures given below for Chian trade are based on reports covering the years 1900–12, figures for 1904 being lacking. Returns are also available for 1914, but, as the conditions in that year were for various reasons abnormal, these figures have been used with reserve. As in other cases (e.g. Crete and Sámos), the figures given in tabular form aim at expressing the normal in each case for the period covered, further particulars being given in comments subjoined.

The total volume of Chian annual trade in the period covered averages only about £480,000, but, if only two bad years (1902 with £450,000 and 1912 with £395,000) are omitted, the average stands nearly £100,000 higher. Further after bad years—the causes of which are definitely traceable (see above)—there has been in every case a rapid recovery to over £600,000, and in 1906 the figures touched nearly £700,000 (1914 = £721,825). It may be safely predicted that £700,000 will be approximately the normal value of Chian trade after the war.

The value of exports is on the whole well in excess of that of imports, though in bad years the reverse was the case, and in 1914 war conditions and the expected introduction of the Greek tariffs caused imports to be more than double the exports in value.

The chief exports are :

<i>Product.</i>	<i>Value.</i> £	<i>Usual Destination.</i>
Dressed leather	130,000	Bulg., Crete, T., Gr.
Oranges and lemons	50,000	Russ., Bulg., T., Gr., Rou.
Olive-oil and olives	40,000	Bulg., Rou., T., Eg., Russ., Gr.
Gum mastic	40,000	A.-H., Eg., Fr., U.K., T., Gr.
Almonds	25,000	India, A.-H., Eg., Fr.
Carobs	5,500	Italy.
Tobacco	5,000	T., Eg., U.S.A., China.
Ground pine bark and valonia	3,000	T., Eg., Bulg., Gr., Russ.
Aniseed	3,000	Bulg., Rou., Crete, T.

N.B.—A.-H. = Austria-Hungary ; Bulg. = Bulgaria ; Eg. = Egypt ; Fr. = France ; Gr. = Greece ; Rou. = Roumania ; Russ. = Russia ; T. = Turkey ; U.K. = United Kingdom ; U.S.A. = United States of America. Crete is distinguished from Greece prior to its union.

In 1909 and 1910 fleshings to the value of £2,500 and £2,000 respectively were exported to U.K. and U.S.A.

In 1914 the value of dressed leather exported was £150,000. The fruit and olive crops vary greatly : oranges and lemons in 1906, £75,000, in 1914, £18,000 ; almonds in 1905, £39,400, in 1911, £16,000 ; olive-oil and olives in 1911, £77,500, in 1912, £25,000. Tobacco will probably surpass fruits in value in the future : its export value has risen from £1,000 to £6,500 in 3 years (1910–12). The export of ground pine bark and valonia is steadily diminishing before the advent of chemical tanning materials. Thus in 1908 the value was £4,000, in 1912, £2,500.

The chief imports are :

<i>Product.</i>	<i>Value.</i> £	<i>Usual Source.</i>
Raw hides	90,000	India, T., Eg., China.
Corn and flour	60,000	T., Bulg., Russ., Rou., U.S.A.
Manufactured goods	35,000	Germany, U.K., Fr., A.-H.
Colonial products	30,000	A.-H., India, Eg.
Cotton yarn	13,000	U.K., T., Gr., Italy.
Timber	9,000	T., Rou., A.-H.
Pine bark and valonia	5,000	T.
Dyes	5,000	U.K., Germany.
Tanning materials	3,000	U.K., Germany, Italy, Fr.
Paper and cardboard	2,750	A.-H., U.K.
Iron	2,500	Belgium, U.K.
Coal	2,000	U.K.

About 1907 Germany took first place in Chian import trade, the United Kingdom coming second. A fair proportion

of the imports are not manifested under their original source, as British and German goods were mostly transhipped at Smyrna, Piraeus, and Syra or came via Constantinople, thus counting as trade with Greece or Turkey.

A British vice-consul and the consular agents of other foreign powers are resident in the town of Chíos, and there are branches of Athenian and other Levantine banks.

Chian trade is borne in an average of 4,000 vessels annually with a total capacity of 770,000 tons. Of these, 1,250 on an average are steamships with a total capacity of 730,000 tons and 2,700 sailing vessels with a capacity of 40,000 tons. There was a steady rise in Chian shipping, mainly due to increase in steamship tonnage, from about 1905, until in 1909 the total figure stood at over 900,000 tons, but after that came a decline.

Of recent years (1910-12) the steamships have been (in approximate order of tonnage): Austro-Hungarian; Greek; Russian; American (United States); Belgian; Turkish; Bulgarian; Italian; British (in 1914: 40 steamers=32,060 tons); French. The sailing vessels were practically all Turkish (mostly Greek Ottomans) and Greek.

In 1882 Chíos had a fleet of some 450 sailing vessels. In 1907 there were owned in the island 25 steamships and about 88 sailing vessels. Most of these vessels were engaged in foreign trade and rarely visited the island.

The only commercial port of any importance is that of the capital, though mineral products were shipped direct from Hagiásmata bay on the north coast, and Kardámyla has a small local trade.

POPULATION AND SETTLEMENT

Before the massacre of 1822 Chíos was reckoned to have 100,000 inhabitants. The numbers rose steadily during the latter part of last century, but the earthquake of 1881 and emigration have tended to depress them. In 1910 the population was 68,704. At present it is 69,034, of whom 62,000 are Greeks and the remainder Moslems, Jews, and other nationalities. Emigration became common under the Young



Turk régime, and about 2,000 people emigrated in 1909-10, mainly to Egypt and America. After the taking over of the island by Greece emigration was checked by the Greek military service laws. During the European war about 20,000 Greek refugees from Asia Minor have come to Chíos.

The population is fairly well distributed, the only large town being the capital. **Chíos** or **Kástro** (or Scíos; pop. about 14,000, P. T. O., C. H.), the capital, is situated about the middle of the east coast in a position somewhat resembling that of Mytiléne. The town is built along a flat and fairly straight coast about 2 miles north of Cape Hágia Heléne; close behind it rises a low olive-crowned ridge, soft-sloped towards the east but falling steeply and ruggedly to a ravine on the west. This ridge circles round the town on the north-west and south-west, and behind it in the south-west rises a steep bare hill which commands the whole scene. Immediately north of the town is a small blunt promontory occupied by a Genoese fortress, which is surrounded by a ditch (15 ft. deep and 40-50 ft. wide) and is in a dilapidated condition. The town itself is situated mainly just south of this citadel and west of the harbour, but houses and villas struggle along the low coastal strip north and south of the town for some miles. The earthquake of 1881 destroyed the former town almost completely, and the present town is new and well built but ill-planned. The chief streets lie along and lead from the quays; behind them the houses climb the hill-slopes irregularly, and a large drill-ground separates the town from the citadel. Only Jews and Moslems live in the vicinity of the latter. The streets are well paved (stone flags or macadam), but the exits from the town are difficult to find. There are good harbour works (see p. 129). Water comes from springs 3-4 miles away to two reservoirs about 1 mile from the town. The supply is insufficient in summer and autumn.

Chíos is the centre of the *nomós* of that name (including Chíos, Psará, Antípsara, and the Oinoúsai Islands) and is the seat of the *nomárchos* and his administrative staff. There are also a gendarmerie head-quarters, a small military garrison,

courts of law, a *démarchos* (mayor), and other municipal authorities. A Greek bishop resides here, and there is a (Greek Orthodox) cathedral. There are a civil as well as a military hospital (the former large and well equipped), higher and lower schools, churches, a library, a club, prisons, and other public institutions.

The commercial life of the town is important. Along the quays are the custom-house, principal hotels and cafés, offices of the foreign consuls, but there are no warehouses. The principal business street is just south of the citadel, running west from the harbour. The town contains a large number of tanneries and mastic-mills, besides 2 large flour-mills, 2 foundries and machine-repairing shops, olive-oil and soap-works, and other smaller industrial concerns. A feature is the numerous windmills with squat towers and circular spread of sail which dot the ridge behind. They are mostly used for corn or mastic-milling. The harbour is busy with foreign trade and shipping. There are good overseas communications, and roads lead inland to all the principal villages.

The country around the capital is green, fertile, and beautiful. Particularly Kámpos plain to the south is thickly studded with houses amid fruit-gardens, but there are no large villages. The 'mastic' country to the south contains some 22 villages with about 5,500 people in all, the largest village being Kalamoté (pop. 1,300). Volissós, near the bay of the same name in the north-west, lies on the hills above a small but fertile coastal plain and has about 2,750 inhabitants (P. T. O., C. H.). It is said to be leprosy-infected. Kardámyla (pop. 6,600, P. T. O., C. H.), up a small valley opening on Mármara bay (north-east), is the centre of a fertile carob-growing area and has, through its *skála* (Mármara), a small trade carried in sailing craft. Along the north coast there are several villages near the mouths of the fertile valleys which open northwards (e.g. Kéramos, near which antimony was mined). The villages of the north and north-west mountain region are all built on steep slopes; they consist of stone houses, flat-roofed and dark, built close together;

they are extremely dirty and swarm with pigs. On the north-east coast, over a small cultivated plain, is Langáda (pop. 2,350, C. H.), opening on Kolokythiá bay.

The settlements of Chíos—other than the capital—show the former prevailing fear of pirates, and, like those of most other Aegean islands, they are built in difficult and inconvenient positions inland. Recently a tendency has shown itself to return to the lower level (e. g. Mármara, a modern fishing and trading village founded from Kardámyla). The houses, owing to the fear of earthquakes, are of stone and seldom more than 2 stories high. They are often surrounded with fine gardens enclosed in stone walls.

Of interest are the 11 monasteries, the two most important of which are Néa Moné (in a huge mountain-cleft about 6 miles west of the capital and about 2,000 ft. above the sea) and Hágios Menás (near the south-east coast 5–6 miles south of the capital). Both of these were the scenes of massacres in 1822, and the former has a romantic history and is famed for its works of Byzantine art. It possesses agricultural land but was almost completely destroyed by the earthquake of 1881.

PORTS AND HARBOURS

The principal harbour and commercial port is that of the capital. The coast hereabouts is flat and exposed, but advantage has been taken of the two projections north and south of the town to build two breakwaters, that from the north extending south-east to an old fort and then ESE. for 430 yds. in all, the one on the south stretching NNW. for 355 yds. The entrance is 115 yds. wide. The work was planned by French engineers, but the entrance is difficult to negotiate in a swell, and large vessels generally remain outside. The water within the breakwaters is roughly rectangular and measures 750 yds. (NNW.–SSE.) by 360 yds. (WSW.–ENE.). The central part is dredged to a depth of 30 ft. and the rest to 13 ft. except along the south quays and the inside of the breakwaters, where the depth is 6 ft. Stone quays—50 yds. wide and $4\frac{1}{2}$ ft. above water—extend all around the harbour

from breakwater to breakwater ; they have 6–8 ft. of water alongside, landing-steps at several places, a small hand crane (3–4 tons lifting capacity), and a fountain of water in one place. The port and quays are administered by a private company ; the health and port offices are in the old fort mentioned ; the custom-house and offices of the company face the harbour on the north-west. There are no warehouses ; the business part of the town stretches around and immediately behind the quays. Loading and unloading are usually done by lighters, but vessels can come alongside the quays. There are no coaling facilities, but a small amount of British coal can usually be had ; water is shipped in casks, but the supply is uncertain. The foundries in the town can undertake small repairs. Food and provisions can be obtained from the town in limited quantities, and there are roads leading inland and telegraphic communication with Syra and Sámos.

Large vessels usually anchor $\frac{1}{4}$ – $\frac{1}{2}$ mile south-east, east, or north-east of the harbour in 12–18 fathoms over a mud bottom, but in autumn north-east gales cause a great swell, and communication with the port is difficult.

An anchorage for large vessels is Volissós Road on the north-west. There is shelter in 9–12 fathoms from northerly winds for a good many vessels. The other inlets of the west coast (e.g. Mestá and Halóúntos bays) are suitable for small craft only and have no supply of fresh water. The Aspró islets, north of Mestá bay, also afford shelter and anchorage to small craft. Mármara and Parápanta bays on the north-east have convenient depths and room for small vessels, but they are open to the north and are dangerous in southerly winds, which sweep down over the hills. Mármara, however, is a small trading port visited by about 100 vessels (1,300 tons in all) annually. Kolokythiá bay is one of the best anchorages for large vessels. It is open to the east and has a rock in the middle of its entrance, but in the south-west corner there is good holding-ground in 20–10 fathoms, with a small stream, a good spring, and some houses in the adjoining valley. There is also a useful cove for small craft (15–6 fathoms) in the

north-west corner. The two bights of the south-east coast also serve as convenient havens for vessels north-bound through Chíos strait in strong northerly winds. In the more northerly bight (Megálo) there is an anchorage in 10–8 fathoms in the north part, and in Kalamoté bay (farther south) good anchorage in 16–14 fathoms with a supply of water.

COMMUNICATIONS

Chíos, owing to its central position with regard to the Asiatic coast, is particularly well supplied with external communications both transmarine and submarine. Practically all the lines of vessels regularly engaged in Levantine traffic call.

Before the European war the following lines of steamers called at the port of the capital: the Austrian Lloyd; a Russian; two Italian; five Greek; one or two Turkish (Smyrniot) lines; besides Bulgarian, occasional British, American, French, and others. The majority of these carried passengers and mails; some were cargo boats only. Most of them called weekly both outwards and inwards, some (e.g. the Italian boats) fortnightly. By these means Chíos stood in regular connexion with all Levantine ports (Greek, Turkish, Egyptian) as well as with many of the adjacent islands.

Eight lines of submarine cable are landed near the capital. The more important of these belong to the Eastern Telegraph Company. These are: to Syra (2 lines) and thence to Piræus; to Chesme (2 lines) on the peninsula (Karaburun) opposite; to Ténedos (1 line) and thence to Salonica and Constantinople. Other lines—formerly Turkish—connected Chíos with Sámos, Mytiléne, and Hagnóusai Island (in the Oinoúsai or Spalmatori group) immediately to the east of Chíos. The lines leading to Turkey have been probably cut during the war.

Within the island there appears to be telephonic or telegraphic connexion between the capital and Kardámyla.

There are several roads leading from the capital to the interior, but they are not in good condition:

Route 1 : Chíos-Volissós.—The road leads from the open space west of the fortress, skirts around this, and runs northward through flat ground with houses and gardens, crossing low hills and a large stream-bed (usually dry). Soon after it begins to incline towards the west, and begins to mount through the widely scattered village of Vrontádos (alt. 900 ft.; mile 3) inhabited by a fishing population. This village escaped with little damage in the earthquake of 1881. Soon after Vrontádos the route, now a half-finished rough carriage-road, mounts with sharp zigzags the steep side of a plateau. This part is visible from the sea to east. The top is reached after an hour's climb (mile 4; $1\frac{1}{2}$ hour). Track goes west and then north-west across a softly mounting undulating plateau (average elevation 1,320 ft.), very barren with low scrub. Here and there are shepherds' huts and a few pines. Track crosses a valley which trends south-west ($3\frac{1}{2}$ hours) and soon afterwards runs through a pine wood. Track mounts north-west and north fairly steeply to a pass at 1,444 ft. (mile 8; $5\frac{1}{2}$ hours). From this point the north-western part of the island and the island of Psará are visible and also the steeply escarped western flank of the central range stretching away north to the twin peaks of Mount Hágios Elías (4,157 ft.). Over pass is a spring. Track becomes a narrow mule-path and goes west across rolling hills cut by ravines. Occasional pines are the only trees, and there is very little cultivation. Track crosses head of valley running south-west (mile $10\frac{1}{2}$; alt. here 1,214 ft.), and then goes west over hill and dale to Volissós (pop. 2,750; mile $16\frac{1}{2}$). Below (south) is a small cultivated plain and a connexion by sailing craft with Psará.

Route 2.—This road (15 ft. wide, metalled, and in good repair) runs from the same place (the opening south-west of the fortress) in the capital for about 2 miles north-west along a spur. It mounts slightly and stops abruptly about $\frac{1}{4}$ mile before Karyaí village, up to which (situated 150–200 ft. above, alt. 650 ft.) a rough mule-track leads. The village stands in a fold of the hills and is not visible from the sea.

It has a fine church and bell-tower. Behind the village rise steep precipices.

A track leads south-west from Karyai along the hill-face to the gorge in which stands Néa Moné. This track commands a fine view of the capital and lowlands to the east.

Route 3.—A carriageable road leads south from the capital to the plain of Kámpos and thence over low hills to the monastery of Hágios Menás (about 5 miles).

The other parts of the island are approached only by rough tracks. Carriages are obtainable in the capital, and horses, mules, and asses are available for transport.

THE OINOÚSAI ISLANDS

Stretching south-eastwards from the north-east extremity of Chíos and occupying about half of the space between that island and the peninsula of Karaburun (i.e. the northern entrance of the strait of Chíos) are the Oinoúsai or Spalmatori Isles. They consist of one fairly large, one smaller, and three quite small islets, besides numerous rocks and reefs. The group as a whole has a long narrow shape lying north-west to south-east, the north-western extremity, which is pointed, being separated from Chíos by a strait 2,100 yards wide and 15-22 fathoms deep, while on the east a passage $4\frac{1}{2}$ miles wide and on an average 45 fathoms deep separates it from Karaburun. The length of the group (north-west to south-east) is about $7\frac{1}{2}$ miles and the average breadth $1\frac{1}{4}$ mile. The area of the group is about 9 sq. miles.

The composition appears to be of semi-crystalline schists (argillaceous mica schists with quartz and phyllite), and the islands consist entirely of soft rounded hills with convex slopes. The largest, Hagnoúsai, is about $5\frac{1}{2}$ miles long (north-west to south-east), $5\frac{1}{2}$ sq. miles in area; two of its hills rise to 555 ft. and 478 ft. respectively. Its coasts, especially along the north and west, are cliff-bound and have numerous off-lying rocks and reefs. The islets south-east of Hagnoúsai are much smaller and have hills 360 ft. and 150 ft. high. These islets lie closely grouped under the south-east extremity of

Hagnoúsai and are separated from it and from one another mostly by narrow and shallow channels set with numerous rocks.

The ancient name, Oinoúsai, indicates wine production, and the schist formation probably favours this form of cultivation. Minerals may also occur. There are one or two small settlements, and the inhabitants number 1,915 and come from Kardámyla. The islands belong to Greece and were taken along with Chíos ; they form part of the *nomós* of Chíos.

The chief importance of the group lies in their value for navigation and the control they afford of the strait of Chíos. The south coast is deeply indented and has numerous coves. In addition the islets at the south-east end form by their juxtaposition two roomy harbours, with secure anchorage in 16-10 fathoms in strong north-easterly winds. The more northerly of these harbours (Bogazi), though more difficult of entrance and less commodious than Port Pasha to the south-east of it, is more secure. The two harbours are connected by a boat-passage.

PSARÁ

Physical Features

About 11 miles west of Cape Hágios Nikólaos, the most westerly point of Chíos, lies Psará. Its north coast lies in a line with the north coast of Chíos, and the strait between the two islands is deep and clear.

Psará is roughly oblong in shape, nearly 5 miles long (north to south), of an average breadth of 3 miles (east to west), but the southern half is slightly narrower, and at the north-west a large oblong projection runs out north-west and makes the island in this part nearly 5 miles wide. The area is roughly 16 sq. miles.

The north and east coasts are in general straight, except for small indentations and sharp capes, and present an unbroken line of cliff. The west coast has fair-sized irregular bays to the north and south of the promontory mentioned,

and the south coast has also two bays, a larger near the south-west corner and a smaller farther east. In the inner recesses of all these bays are curving sandy beaches, but the promontories which intervene are high and cliff-bound, the south-western running out south for nearly a mile and being only 200–300 yds. broad. The submarine slope of the north and east coasts is steep, and the water in these directions rapidly deepens from 60–70 fathoms to 140 fathoms, but on the west and south there are gentler descents. The shallowest parts are in the channel between Psará and Antípsara, which sinks to only 31 fathoms.

The island is mainly occupied by a range of hills which runs from the south-east corner straight up (north) along the east coast and close to it. Near the north-east corner of the island a right-angled turn takes the chain west, and here it rises to Mount Hágios Elías (about 1,660 ft.). Westwards the chain divides into a group of hills occupying the north-west promontory. Towards the south-west the main range sinks gradually and leaves a strip of undulating lowland which curves across inland from the central western to the south-western bay. Beyond this strip the south-west corner again is occupied by hills. The general appearance of the island is rugged, and Mount Hágios Elías is conspicuous from afar.

The greater part of the island is rocky and barren, and the small valley plains of the west and south, opening on the bays mentioned, are the only cultivable patches. Here vines, figs, and mulberries are grown.

History and Inhabitants

In the Greek War of Independence the Psariots played a great part. Their merchant fleet formed an important part of the naval forces of the Greeks and executed many daring exploits. The Turks wreaked vengeance on the little island in 1824, when 14,000 Turkish troops attacked and overwhelmed the town after a desperate resistance. Some 3,000 Psariots and Greek refugees were massacred, 2,000 fled, and the town was razed. The refugees found homes in Syra and other

places and were subsequently settled in Erétria (Néa Psará) in Euboea, and were given special privileges. The island has never recovered from this blow, and the town still has a somewhat lifeless appearance. Psará remained Turkish at the end of the War of Independence and was taken by the Greeks in 1912. It now forms part of the *nomós* of Chíos, and sends two deputies to the Athenian Chamber.

The population numbers now 710, who mostly live in or near the capital, a poor village situated in the south-west corner of the island at the base of the long peninsula mentioned above. This is low where it joins the land behind but rises to a rocky eminence at its southern end, where it is crowned with an old fort. Behind (north of) the village is a windmill-crowned hill

Port, Harbours, and Communications

Under the east side of the village is a small port with a mole (2–2½ fathoms alongside) offering shelter to a few small vessels. A steamer of one of the Greek island lines calls weekly, and there is a small trade. Communication with the island is otherwise by sailing boats only.

The large bay in which the port of Psará is situated is an excellent anchorage in summer, for, though open to the south, it is sheltered from northerly winds and has good holding-ground in 8–12 fathoms.

ANTÍPSARA

About 1½ mile west of the south of Psará lies the rocky and hilly island of Antípsara, with a closed and cliffy coast except on the east, where there is a small bay. The island is shaped like a parallelogram and is about 1½ mile long (NNE.–SSW.) and the same broad (east to west). A little cultivation is carried on near the head of the eastern bay by some 20 people from Psará. Temporary shelter can be had from north winds under its south shore. South of its south-east corner is another small islet. There are in addition several rocks scattered round the north-west and west coasts of Psará.

SÁMOS

PHYSICAL FEATURES

The peninsula of Karaburun (ancient Klazomenai) may be said to divide the western coast of Asia Minor into halves. Near the northern end of the southern half and helping to form the large bight which lies south of Karaburun peninsula is Sámos, one of the most notable of Aegean isles. It lies due east of Ándros on the opposite side of the Aegean and only a little south of east of Athens, with whose bare-looking surroundings its landscape has often been contrasted. Sámos of all the more important islands in these waters lies nearest to the Asia Minor coast, being separated by a strait, at its narrowest barely one mile wide, from the thin oblong peninsula of Samsun Dagħ (ancient Mykale), whose bare rugged heights and massive twin peaks (3,966 ft. and 4,130 ft.) tower above the narrow passage and lend to the entrance a wild and impressive grandeur. The extremities of these two land-masses—the western extremity of Samsun Dagħ and the eastern of Sámos—overlap by about 4 miles, Sámos as a whole lying WNW. of the peninsula. From Chíos on the north-west Sámos is distant about 42 miles, and from Ikaría, the nearest large island on the west, about 12 miles. With Ikaría and the intervening Phoúrnoi islets Sámos forms one of those characteristic island chains stretching out westwards from the Asia Minor coast which look like the fragments of former land-bridges and which were so helpful to ancient trade and maritime enterprise.

Sámos lies within the 100-fathom line, which skirts its north coast at distances ranging from 1 to 2 miles but approaches to within a few cables of the west coast. Southwards the submarine depression has slopes less steep. The strait of Sámos (between Samsun Dagħ and Sámos) has depths of 17–40 fathoms, but its western and narrowest part has an outstanding rock and patches with 5–9 fathoms over them. Off the east end of the island is a deep sea-pocket with depths up to 140 fathoms, occupying the centre of the bay between Sámos and the mainland opposite (east of) it.

Sámos has a curious shape much resembling a narwhal swimming westwards. The north coast forms a fairly regular arc, convex towards the north. The south shore is marked about its middle by the broad square-nosed promontory running south whose most prominent southern point is Cape Kolónnais and by a smaller and somewhat similar promontory at the south-west extremity of the island. Between these two lies the bay of Marathókampo with finely curved outline. From the Kolónnais promontory the shore runs north-eastwards with broad flat-curving bays and numerous headlands to one of the two most easterly points of the island, Cape Gátos, which lies about $2\frac{1}{2}$ miles north of the Samsun Dagħ peninsula and marks the eastern end of the strait of Sámos. The eastern end of Sámos is a peninsula whose neck, $2\frac{1}{2}$ miles broad, is formed by Vathý bay on the north and a flat-curving bay on the south. Eastwards of this neck the peninsula expands and runs out in various directions in long arm-like promontories, the longest of which runs east parallel with the Gátos promontory on the south and terminates in Cape Práso ('Green'). Cape Práso is almost exactly as far east as Cape Gátos. It is this eastern promontory which looks like the narwhal's flukes, the dorsal curve being represented by the convex north shore and the blunt head by the square-nosed western extremity of the island. The extreme length of Sámos—from Cape Gátos to the most westerly point—is 27–28 miles. The greatest breadth—from Cape Kolónnais to the north coast opposite—is about 12 miles, though at either side of the Kolónnais promontory the island narrows to $2\frac{1}{2}$ miles (on the east) and $4\frac{1}{2}$ miles (on the west). The estimates of the area vary widely, but the island probably contains 180–190 square miles.

The chief coastal irregularities are caused by the eastern peninsula referred to above. On its north-west side this helps to form Vathý bay, a slot-shaped opening $2\frac{1}{2}$ –3 miles long (north-west to south-east) and about 1 mile broad in its outer and $\frac{3}{4}$ mile broad towards its inner part. This is the most enclosed piece of water the island possesses. Three

other inlets, broad and open, face northwards and eastwards around the eastern peninsula, the largest—between the Práso and Gátos promontories—dividing into two, which run north-west and south-west respectively. The rest of the coast is much more regular. The broad evenly curving bays of the south coast have been mentioned. Only at two places, near the south-west corner of the island and near Port Tegáni (opposite Samsun Dagħ), are there any coves. The western and northern coasts are closed and have nothing beyond a few shallow indentations. The greater part of the coast is cliffy, the western end particularly being backed by high mountains which fall precipitously into the sea. Even the lower eastern peninsula has rocky coasts and numerous cliffs, but there are considerable sandy stretches along the curving south-eastern bays, opposite Marathókampo (south-west), Karlóvasi (north-west), and at the head of Vathý and other smaller bays. These sandy beaches are all skirted by shallows of 1-3 cables' width with depths ranging from $1\frac{1}{2}$ to 5 fathoms. There are one or two off-lying islets, the largest being Samopóula, situated about 1 mile off the south-west corner of Kolónnais promontory.

The interior of Sámos is hilly and in part mountainous, but the formation and distribution of the hill masses are confused. Most striking and distinct is the massif of Mount Kerkí, which occupies the blunt western knob of the island. Mount Kerkí appears to be one massive and almost circular mountain-lump, girt round above with precipices, with three sharp gleaming white peaks, close together and rising to 4,725 ft. and conspicuous from the sea in all directions. The summit is difficult of access, wild, and barren, and the sides of the mass plunge with steep menacing slopes into the sea on the south, west, and north-west. The second mountain mass—more extensive but less rugged and imposing—lies athwart the middle of the island. The highest summit lies almost due north of Cape Kolónnais but nearer to (about $3\frac{1}{2}$ miles from) the north coast. This height, which is rounded and easy of access, is called Mount Ámpelos (Hágios Elías)

and is 3,780 ft. high. Southward from it runs a chain of hills into the Kolónnais promontory, with heights sinking to 2,460 ft. The whole chain has been called Ámpelos ('Vine') or Péfka ('Fir') mountains, but local names for peaks in the southern part are Mounts Sópela and Vourniá, between which a pass leads from east to west at about 2,000 ft. The Kérki and Ámpelos groups are linked by a lateral (east to west) chain of irregular and much lower hills, across which one or two easy passes lead from north to south. Northwards of these hills and of Mount Ámpelos the whole of the north-western part of the island as far as the coast is occupied by irregular spurs and ridges, most of them directed northwards, often soft and forested or cultivated, but rising in many places to sharp bare peaks of fantastic and striking outline. The general slope of these hills towards the north is much gentler than on the south, for towards Marathókampo bay on the south-west and the plain of Sámos on the south-east the fall is abrupt and rough. The south-east part of the Kolónnais promontory is occupied by sharply conical hills with heights of 1,634 ft. and 902 ft. The eastern half of the island is much lower and more gentle-featured than the western. It is occupied by low irregular hills with soft forms, easy avenues between them, and heights of 750–930 ft. The eastern peninsula is of the same character, except that its long arms are formed by higher and sharper ridges with broken outlines and cliffy sides. Cape Gátos has close behind it a height of 836 ft.; the Práso ridge mounts in places to 1,230 ft., while flanking the east coast of Vathý harbour is a ridge reaching to 1,125 ft.

The only large plain is the plain of Sámos or Chóra facing the south-eastern bay south-west of Port Tegáni. It stretches for about 3 miles along the bay and is about 1 mile deep. It is stony in places, cut across by streams, and backed by low rocky foothills which rise steeply behind (on the west and north) to the Ámpelos mountains. There is also a fair amount of flattish ground about the neck of the eastern peninsula and behind Karlóvasi bay on the north coast.

Besides this there are many valleys, relatively large, opening on the north-west, south-west, and south-east coasts.

The streams of Sámos all dry up in summer, but they are numerous, of fair size, and flow for a good part of the year. The largest are those which flow south-east from Mount Ámpelos and cross the plain of Sámos (Chóra). There are several of these, broad strong-flowing brooks in winter and spring, which tend to change their courses. That which descends from the valley by Chóra loses itself before it reaches the sea. Another large brook flows in a valley east of Mytiléne village and empties into the bay opposite Samsun Dagħ; another, rising near Pýrgos, flows south-west from Mount Ámpelos into Marathókampo bay. Others empty on the north coast, notably two near Karlóvasi. There are in addition good perennial springs on the better-wooded hill-slopes, and the island as a whole has sufficient water.

GEOLOGY, CLIMATE, AND FLORA

The basis of Sámos appears to be formed of schistose rocks, which come to the surface: on the south-east slopes of Mount Kerkí and the southern side of the hill-chain proceeding eastwards from it; largely in the southern half of the Ámpelos range (forming all the west and south-west parts of the Kolónnais promontory and the mountains immediately west and north of the plain of Sámos); and in a long strip, $1\frac{1}{2}$ –2 miles broad, stretching along the north coast at the base of the Ámpelos heights and reaching eastwards nearly as far as the bay of Vathý. On top of these and covering about half of the island is laid a massive limestone covering which forms all the principal heights and uplands, notably Mounts Kerkí, Ámpelos, and the ridges of the north and south-west parts of the eastern peninsula, besides being interbedded in greater or less mass with the schists in the southern parts of the island. Later depositions are the Tertiary formations, including volcanic rocks, which form two 2–4-mile-broad belts: one reaching from the north coast around Karlóvasi to the south coast at Marathókampo bay, dividing the two limestone

massifs of Kerkí and Ámpelos and spreading along the north coast of Marathókampo bay ; the other stretching from the head of Vathý bay south-eastwards and south-westwards to include all the neck of the eastern peninsula and the lowlands and hills as far as the east part of Kolónnais promontory. Of still more recent formation are the alluvial deposits which form Sámos (Chóra) plain, the smaller plain around the bay opposite the head of Vathý bay, and smaller patches at the mouths of streams.

The schists are mainly grey-green shiny mica schists, which are rich in quartz and tend to pass over into quartzite or into argillaceous schists. In the latter, near Karlóvasi, is a layer of alum schist. The limestone is mainly crystalline (marble) or semi-crystalline, fine-grained, and of shades ranging from blue-black through light-grey to pure glittering white. There is also a brownish-yellow dolomitic limestone. The Tertiary formations of the hilly depression between Mounts Kerkí and Ámpelos consist of coarse limestone conglomerates and clays of varying colour, those of the south-east being yellow-white limestone banks with pebbles and clay. The later deposits, which cover the lower hill-slopes, and the alluvial deposits are conglomerates of more or less loose composition. Amongst the Tertiary rocks occur volcanic and igneous rocks—porphyritic (between Mounts Kerkí and Ámpelos), serpentine, &c. These seem also to occur in connexion with the crystalline formations (limestone and schists) and are probably the cause of the fantastic splintered forms of some of the bare peaks in the northern hills (cf. Lémnos, Ímuvros).

Of minerals iron ores (mainly haematite) are widely distributed but appear not to be rich enough to be of commercial value. Those which occur in the limestone, or at the contact of limestone and schists, often contain zinc. On the north-west side of Mount Kerkí (near Drakaíoi village) calamine occurs near the haematite, and the surface-appearance gives promise of the deposit being large. Traces of copper occur. Lead-glance (galena) is fairly widely distributed, occurring in con-

nexion with haematite in quartz veins and in the limestone : good specimens in considerable bulk were found near Drakaíoi. In Mount Kerkí there is probably emery also. Near Karlóvasi is a bed of lignite but too small to be valuable, and in the same neighbourhood are clays good for making tiles and earthenware. Antimony and manganese are also reported to occur.

Sámos is subject to earthquakes. Some of the occurrences are slight, but others (e. g. that in 1873) have been severe.

The climate of Sámos resembles in its general features that of the western coastal district of Asia Minor, but it is modified considerably by the presence of the sea, exposure to wind, and the absence of great heights in the immediate vicinity. Thus the climate is much more equable than, for instance, that of Smyrna, whose maximum range of temperature is 45.1° F. (November) and minimum 34.9° F. (December), whereas in Sámos the maximum is only 35.6° F. (August) and minimum 23.6° F. (July). July and August are the hottest months with temperatures of 90° – 91° F. (cf. Smyrna : 100° – 102° F.), and December and January the coldest with 34° – 32° F. (cf. Smyrna : 33° – 25° F.). There is a fairly rapid rise of temperature in spring and early summer (March–May), but the autumn months remain warm until November, towards the end of which there is a considerable drop. Owing to the sea-breezes the heat becomes unpleasant only late in the season. The southern side of the island is warmer than the northern, and the valleys and exposed hill-sides of the south may become torrid. Frosts are rare ; the atmosphere is moist, and the annual rainfall amounts to about 33 inches. December is the wettest month, with over $7\frac{1}{2}$ inches ; November, January, February, and March all have over $4\frac{1}{2}$ inches, and all these months have 10–14 days on which rain falls ; June–September have little or no rain. Thunderstorms occur mainly in summer. Snow hardly ever falls. The winds are the usual Aegean ones. In spring, summer, and autumn they blow predominantly from the north-west and north, sometimes for days together, and there are few calm days. In

winter they are more variable, coming mainly from the south and south-east, and there are a good many days calm. In winter there is also a fair proportion of easterly winds, which appear to be due to mainland influence. (See also note on 'Climate', p. 177.)

Sámos retains a fair portion of its primitive forests. These are found mainly on the middle slopes of the two higher mountain masses, Kerkí in the west and Ámpelos in the centre. The trees are said to be mainly oaks and pines, thickly grown and often large, and with thick tangled undergrowth. Many of the lower northern ridges and hills also are clothed with forests of fine trees. On the west slopes of Mount Kerkí, besides fine pines, a tree species of juniper grows. Above these forests project the sharp bare peaks of the higher hills, while below them vegetation of cultivation (olives, carobs, vines, &c.) clothes the hills, especially on the north, to a considerable height and often surmounts the hill-tops. The valleys have fine plane, chestnut, and other trees, and along many of the streams oleanders grow in profusion. There is plentiful scrub, especially in the east, and a good deal of this is highly aromatic. There are in addition the plants of cultivation, some of which have been referred to, and around Tegáni date-palms thrive.

Somewhat barren and parched-looking from the south, Sámos (like most of the northern and central Aegean isles) on the cooler and rainier north presents a beautiful green and fresh landscape, whose charm is saved from softness and insipidity by the striking rugged profiles of the mountain masses and the sharp contrast in the lower parts between the bare peaks and the wooded ridges and hills. The eastern part of the island is barer and in every way less striking than the west and centre, though around Vathý harbour the hills and slopes are beautifully green.

HISTORY AND ADMINISTRATION

Sámos lies directly opposite Attica and the northern Peloponnese, and the sea-interval is largely bridged by the

chain of islands composed of Ándros, Ténos, and Mýkonos on the western and by the Phoúrnoi islets and Ikária on the eastern side. On the other hand Sámos commands the outlets of two of the largest valley systems of Asia Minor, best known by the ancient names of their rivers—the Kaýster on the north-east and the Maeander to the south-east. Near the mouth of the former stood the famous town of Ephesus; near that of the Maeander, Miletus. While therefore the more northerly isles (Ímvros, Lémnos, &c.) possessed a naval and strategic value as commanding the entrance to the Black Sea, which made their possession of vital importance to Athens drawing her grain from Black Sea ports, Sámos rose much earlier to wealth and fame as commanding the two main trade-routes from inner Asia Minor and as a maritime trading and commercial state bringing East into contact with West. Their only serious rival in this early 'middleman' and forwarding activity was Miletus, and a long and bitter struggle resulted in the triumph of the land state with its superior resources. Nevertheless Sámos was not without internal resources; Samian enterprise made itself felt throughout the Mediterranean, and Samian sailors had a reputation for skill and bravery. With the growth of Persian land-power, however, the position as between Sámos and Miletus was reversed, and the island power rose to the highest fame, wealth, and magnificence. The ancient capital stood on the plain of Sámos in the south-east of the island, near the present Port Tegáni. Playing a varied and not always creditable rôle in the changing scenes of those centuries Sámos, a typical maritime democracy, was first the ally and then the vassal of Athens. Later it fell to Rome and, in consequence of disloyalty, was shorn of its privileges. It remained, however, rich and famous for its pottery and as a health resort, and disputed with Smyrna and Ephesus the position of first city of Ionia.

Important under the Byzantine empire as the head of the military district of the Aegean, the island afterwards shared in general the fate of Chios and became the property of the

same Genoese commercial syndicate (see p. 116). The Turks annexed it in 1453, but the island remained nearly uninhabited till 1550, when it was repopulated, partly with Albanians.

Upon the outbreak of the Greek War of Independence the Samians hastened to join the movement and took an active part in the struggle. Though several times threatened with extinction, they were luckily preserved, one of the most notable incidents of the war occurring in 1824 (July 31 to August 5) in the strait of Sámos, when the Greek admiral, Kanáris, set fire to the leading frigate of the Turkish fleet, scattered the strong Turkish forces which were waiting on the Asia Minor coast to overwhelm the islanders, and put an end to the Turkish enterprise.

The Samians were in consequence greatly disappointed when by the terms of the Peace of London the island was not included in the new kingdom of Greece. The three Great Powers, however, guaranteed to her autonomy and virtual independence. The terms of the treaty (1832) as affecting Sámos were the Magna Charta of the island. The Sultan was to grant a complete amnesty to all the islanders ; to authorize the erection of a council of administration, popularly elected from the notables of the island, which should have complete control of internal affairs ; to appoint a ruler, ' Prince of Sámos ', who was to be a Greek Orthodox Christian ; to maintain no troops upon the island, though he was to receive a fixed annual tribute of £2,700 (afterwards reduced by about one-half). The same decree appointed Stephen Vogorides, a Bulgarian of tried capacity and in favour with the Porte, as first Prince of Sámos, with Vathý as capital and seat of the administration. Three years of equivocation, indecision on the one side and open resistance on the part of the Samians, postponed the advent of the new régime, and the port of Vathý was blockaded by the Great Powers. In 1835 the new régime began, and the island government was granted in addition a national flag.

The experiment of an autonomous state within the Turkish

empire was a novel one (the case of Egypt being hardly parallel) and was watched with interest by the Porte and the protecting European powers. It was an experiment which greatly influenced Levantine politics and European statesmen who had to deal with Levantine affairs and the disposal of the crumbling Turkish empire, and from 1832 Sámos may be said to have entered the arena of European affairs. A parallel has been drawn between the case of Sámos and that of Crete, and there was much talk of modelling Cretan government on lines similar to those of the Samian state. The Christian Princes of Sámos were in fact frequently tried by the Porte as rulers in Crete, and Cretan autonomy itself, when it came, was partly modelled on that of Sámos. But the two cases were fundamentally different, if for no other reason than that in Sámos the people were practically all Christians, while in Crete there was a large Mussulman population. The failure of the Samian Princes as administrators in Crete sufficiently illustrates this point.

Various opinions have been held as to the success of the Samian experiment. Judged by its economic results and the happiness of the bulk of the population it may be pronounced a success. Many of the actual administrators were capable and loyal to the island and did much by personal efforts to improve the lot of the Samians. The state of Sámos was distinctly better than that of the Greek communities who remained (e. g. on the mainland opposite) under Turkish rule, and neither the Prince (who enjoyed all the island revenues except the fixed tribute payable to the Porte) nor the island was embarrassed financially. But there were difficulties inherent in the position. The Porte on their part probably accepted the innovation unwillingly and never supported it whole-heartedly. They have in fact been accused by Greek writers of deliberate ill-faith, first in the matter of occupation by troops (expressly forbidden under the original treaty) and also by a systematic attempt to undermine the popular basis of government and to institute a military dictatorship directly dependent upon the Porte. The course of events after 1900

tends to justify this charge. On the other hand the Samians themselves cannot be acquitted of blame. There quickly developed in Sámos that class of local politicians so characteristic of small communities whose sole aim was autocratic power—an element stubborn, narrow, and irreconcilable. The Prince was in a difficult position. He was the nominee of the Porte and dependent, like all Turkish officials, upon favour from high places. Moreover the Prince, at first at any rate, rarely lived in the island. He was also a Greek and a Christian (or was intended to be), and it was difficult for him to represent a heathen tyranny among fellow-countrymen without incurring odium. The local politicians set themselves to reduce his power to a shadow and did not scruple to use both the above facts as levers to upset him. On the one hand they appealed to popular sentiment in the island against the Prince, on the other they appealed directly to the Sultan. It was the mistake of the Sultan in hearing and yielding to the appeals of the Samians against their Princes which finally ruined authority in the island. The position of the Prince, between upper and nether millstone, became impossible, and the logical result was a military dictatorship, which no doubt satisfied, even if it was not deliberately connived at by, the reactionary politicians of the Porte. The Samians on the other hand had only themselves and their politicians to blame for an issue which they had largely brought upon themselves. These remarks will help to explain what follows.

The first Prince, Stephen Vogorides, 'reigned' 1834–1850 through the medium of eleven lieutenants. His absence and their maladministration brought about in 1849 a revolution, the result of which was the resignation of the Prince and a new 'Analytic Charter'. This defined more precisely the charter of 1832 and stipulated: (1) the annual convocation by the Prince of an Assembly of 37 (later fixed at 39) deputies chosen by the island divisions and presided over by the Greek Orthodox archbishop; (2) the orderly and more regular election of these deputies by indirect (and later by direct) suffrage; (3) the definition of the powers of the Assembly and

of the Prince ; the constitution of the former as the deliberative and legislative and of the latter as the executive authority ; the popular election of 8 men, from whom the Prince was to select 4, to act with him as a consultative committee in the execution of his duty. (Two other firmans—one in 1852, the other in 1861—further defined the constitution without radically altering it). Following this charter, though there were difficulties and changes of administrators, there were comparative peace and prosperity. The Princes fostered education and public works, improved the administration of justice, and suppressed brigandage. The Eastern crisis of 1875–8 left Sámos quiet, but an appeal to the Sultan by the Samians to restore a former governor caused the resignation of the then Prince and set a dangerous precedent. Alexander Karatheodori (1885) allowed the Assembly to wax over-powerful ; his authority waned ; trouble ensued and was repressed by calling in Turkish soldiers. This breach of the constitution made matters worse, and in 1894 Karatheodori resigned. The next 18 years witnessed 10 successive Princes, some strong, most of them weak. The Prince's office waned, and he lost the power even of selecting his four advisers, and successive Princes fell victims, now to the Porte, now to the local politicians. In 1909 a Cretan Moslem, Kopasses, was appointed Prince. He represented force, at first veiled but soon naked, and he summoned Turkish troops and gunboats to his aid. Open hostilities ensued between Turkey and Sámos ; Samian patriots—among them M. Sophoules—had to flee the island, and the Turkish flag was raised. The Samians now agitated for union with Greece.

During the Turko-Italian war the Italians bombarded Sámos since it was flying the Turkish flag. In 1912 (March) Kopasses was assassinated. M. Sophoules, returning with Samian volunteers, soon deposed the successor of Kopasses, and on the outbreak of the Balkan war (1912) union with Greece was proclaimed. Fear of international complications restrained M. Venizelos from at once acquiescing, but in 1913 (March) Greece took formal possession of Sámos, which now

forms a *nomós* (with Ikaria, the Phouérnoi Islands, and Kastel-lórizo) and sends 4 deputies to the Chamber at Athens.

INHABITANTS

The Samians are a fine race physically, tall and handsome, with perhaps still a relic of Albanian blood in them. Their climate is healthy—the death-rate is put at 13 per 1,000—and the island was a health resort in Roman times. In food and dress they do not differ essentially from other island Greeks—living simply and frugally and still retaining much of the characteristic island costume, though in the towns western fashions prevail. Their language has some dialectical peculiarities. The Samians are quick-witted, artistic, and ingenious, but their sturdier qualities are somewhat disguised under an appearance of indolence and an easy pleasure-loving habit. Like most island Greeks they are fond of café-lounging, gossip, politics, smoking, faction, and excitement, but their industry is attested by the careful cultivation of their island and their manufacturing enterprise. Their climate and soil encourage an easy existence, but they are noted for their keen interest in learning, and they have artistic talent. In ancient times Sámos was the home of philosophers, artists, craftsmen, traders, and sailors, and the island could boast of marvels of engineering. Autonomous rule in recent times encouraged like activities: local communities undertook their own public works, and the state of the island to-day is a testimony to the skill and local pride of its people. The better among the Samian Princes fostered education. In 1894 or thereabouts there were 48 public schools (about 1 per 1,000 of the population) with 94 teachers and over 6,000 pupils of both sexes. The crown of the educational system was the Pythagoreum (so called after the famous philosopher of antiquity, reputed a native of Sámos), an institution of higher learning famous throughout the Levantine Hellenic world. There were projects also even at that time for agricultural, technical, and other forms of education. In religion the people are almost entirely Greek Orthodox and subject to the archbishop of

Sámos, who resides at Vathý. The island as a whole is rich, and the standard of living, except in the villages of the extreme west, is high. Vathý is a prosperous modern town.

INDUSTRIES

In ancient times the basis of Samian prosperity was mainly trade and commerce, the only productions for which it was noted being apparently wine and pottery. Its comparatively peaceful and autonomous existence during the last century has greatly encouraged the development of the island's resources, and to-day Sámos is perhaps for its size the wealthiest of Greek islands. As in the case of most islands, agriculture is the foundation of wealth, the existing industries and trade being built mainly upon agricultural production. Manufacturing, trade, and a certain amount of seafaring are the subsidiary occupations, pastoral pursuits (owing to the richness of the soil) being comparatively insignificant, while mining as yet hardly exists. The effect of bad seasons and of fruit and tree diseases has been as marked in Sámos as in Crete, Mytiléne, and other parts of Greece, but the better conditions of agriculture and political organization and still more the resources of the soil and the variety of products have done much to save Sámos from the drastic setbacks suffered, for example, by Crete. When the vines failed tobacco was grown, and when the vine disease was overcome both vines and tobacco remained. More serious was the effect of wars—the Turko-Italian, Balkan, and the European—on Samian trade, and the island has still to recover from the succession of shocks, closure of markets, and loss of trade due to these external misfortunes. There is safe and consistent prosperity assured to Sámos if the times and internal Greek politics allow and the former rate of development is continued.

Agriculture

Agriculture is concerned in Sámos mainly with the vine, tobacco, olive, carob, vegetables, and fruit; very little corn is grown.

Vines are grown almost all over the island on the lower slopes except in the extreme west (Mount Kerkí), which is too barren. The vineyards cover large patches of the hill-sides and mount high up. They flourish particularly along the northern slopes and also on the foothills around the plain of Sámos (Chóra). The grapes (muscatel and some black) are rich and sweet, and are used either for wine or dried as raisins. The raisins also are sometimes used to make wine. About 1890 phylloxera appeared in the island and within a few years reduced the crop to one-third or one-quarter of what it had been, and threatened the industry with total extinction. Strict measures for the suppression of the pest taken by Karatheodori Pasha contributed to the unpopularity of that Prince. By the use of sulphur, however, the close inspection or prohibition of vegetable imports (e.g. potatoes), and the replacement of diseased vines by American stocks the pest was brought under control and practically exterminated by 1906.

The blow thus dealt to the wine trade was the chief cause of the rise to importance of tobacco. The rich valley soil of Sámos is particularly suited to this, and the tobacco is of good quality. Some is exported raw—buyers from Egypt sometimes visit the island and deal direct with the growers. The greater part, however, is made up into cigarettes.

Above the vines or scattered between the vineyards and fields are olives, which do well pretty much all over the island. Along with olives, on the higher parts of the hills grow carobs (e.g. on the ridge between Karlóvasi and Marathókampo), and it is these, along with the vines, which lend the landscape of Sámos much of its greenness and charm. Mulberry and fig-trees are fairly plentifully scattered about, and around the houses, in the rich and more sheltered valleys, are orange, citron, and almond-trees.

Vegetables are also grown around the villages: most important of these are onions and beans. Onions do best on the light-soiled and otherwise rather barren slopes of the

extreme west (Mount Kerkí), around the village of Drakaíoi. In the same locality rye is grown and on the plain of Sámos (Chóra) some wheat, but little space is devoted to grain. A plant of semi-cultivation is the styrax (*Styrax officinale*), which grows plentifully on the hills in the east part of the island. The gum, which has medicinal value, is gathered and exported. (For quantities and values of agricultural products see below.)

Manufactures and Other Industries

The manufactures of Sámos have risen rapidly in importance during the last 20 years. As has been indicated, most of them are closely connected with the island agriculture, but some are wholly (e.g. tanning) and some partly (e.g. cigarette-making) independent of it.

Most important is the manufacture of cigarettes. The average island tobacco crop amounts to 630 tons yearly, which showed a tendency (before the war) to increase to about 1,000 tons. The value of this crop ranged from £50,000 to £100,000. Formerly the greater part of the crop was exported, but now the greater part is made up into cigarettes in the island, for which purpose also tobacco from Bulgaria, Turkey, and other parts of Greece is imported. The number of cigarette-factories has increased greatly since 1898, and there are now 35-40 employing large numbers of young men and women. In 1907 some 100 million cigarettes were manufactured, worth about £70,000-80,000. Since then there appears to have been a slight decline, probably due to war conditions.

Next in importance comes tanning. In 1910 there were 24 tanneries, which imported raw and exported dressed leather. The exports amounted in quantity to about half the imports, the other half being used locally. This industry was greatly affected by the Turko-Italian and Balkan wars, and large stocks of leather ready for export were held up in the storehouses at Karlóvasi (the centre of the industry).

Wine-making is also important. Before the outbreak of phylloxera 3-4 million gallons were made in good years. The set-back received (1898-1905) and the competition of tobacco have prevented a complete recovery as yet, but the quantity rose to 2,200,000 gallons in 1912. The value of the yield is now £80,000-£85,000 (formerly £140,000). The wine is of a sweet and heavy variety, very little red being made. It is mainly exported and used in Italy, Germany, and France for making vermuth and for blending. Before export it is strongly fortified with spirits, which are imported for this purpose. That drunk in the island is often treated with resin, as in other parts of Greece. The sweetness and the heaviness of Samian wine (muscatel) are partly due to the practice of letting the grapes half-dry in the sun before taking them to the press. In bad seasons raisins are used to improve the quality of the wine, and raisins have even been imported for this purpose.

In close connexion with wine-making is raisin-drying. Formerly some 3,000 tons were produced annually. The quantity has fallen to about 250 tons. The raisins are both muscatel and black.

In addition to and distinct from wine-making is the manufacture of alcohol—brandy, mastica, &c. There are about 9 distilleries, and cognac and other alcoholic products are exported.

The making of olive-oil takes its place among the industries. An average of 6,250 tons of good-quality oil are produced annually in the island, besides some 380 tons of black olives. From 3,000 to 4,000 tons of the oil and about half of the black olives are required for home consumption. There were (1910) 11 hydraulic oil-presses and 20 hand-presses in the island. The olive crop of Sámos suffers from the same uncertainty and variation as that in other parts of Greece.

Miscellaneous manufactures are : milling (there are 3 steam mills, besides numerous windmills, which lend a characteristic touch to the landscape with their circular spread of sail);

a printing establishment ; a foundry and machine-repairing works ; a clothing (woollen) mill.

Most of the manufactures are carried on in Vathý and Karlóvasi, and the woollen mill is in the latter place.

Pastoral pursuits are comparatively unimportant, though goats are kept, and from their milk a certain amount of cheese is made. Mining has not yet been seriously tried. A few small attempts have been made and abandoned. There is a Greek Government salt-works near the strait of Sámos; which produces 1,250 tons of salt annually. The surrounding waters abound in fish, and a certain amount of fishing is carried on. (For the mineral resources see above, p. 142.)

Trade and Shipping

The following figures are based upon trade returns for the years 1900-14, though figures for some of the years are lacking. The particulars given in tabular form are estimates which aim at showing the normal state of affairs : they do not represent the trade of any particular year. Comments upon these estimates are supplied in the notes appended, and in a few cases definite figures have been given. Besides the great uncertainty and variation due to seasons, war, and state of markets and trade, there is the consideration that the returns upon which the estimates are based may be those for Port Vathý only, and also that Sámos is to some extent the trade-centre for the neighbouring small islands and mainland coast, and this auxiliary trade is indistinguishable from the island trade proper.

In 1900 the total trade of Sámos amounted to £424,000, but owing to the vine disease it fell in 1904 to £324,000. Since then, in spite of wars, there has been a steady rise to £530,000 (1912), and possibly in the near future the figure will stand at about £600,000.

For the first part of the period covered exports and imports about balanced each other in value, but from about 1908 onwards the excess of the value of imports over exports has

mounted from £13,000 to £34,000 and (1912) £50,000. This difference may be due partly to abnormal (war) conditions, partly to money sent home by emigrants, and partly, no doubt, it is to be explained by the incompleteness of the returns (see above). The chief exports are :

<i>Product.</i>	<i>Quantity.</i>	<i>Value.</i>	<i>Usual Destination.</i>
		£ £	
Wine .	12,000 tons	83,000	One-half to N. France; Ger., Holl., Malta, and Italy.
Raisins .	275 tons	<u>2,000</u>	A.-H., Eg., T., Holl., Black Sea ports.
		85,000	
Leather	—	38,000	Bulgaria, T.
Cigarettes	60,000,000	23,000	China, S. Africa, U.K., India, A.-H., Ger.
Tobacco	200 tons	<u>12,000</u>	U.S.A., Eg., Ger.
		35,000	
Olive-oil	2,500 tons	25,000	T., Eg., Bulgaria, U.K.
Olives .	190 tons	<u>1,500</u>	
		26,500	
Carobs .	—	6,000	Italy.
Alcohol .	—	4,000	T., Eg.
Styrax .	—	2,500	
Onions .	—	1,800	T.

N.B.—A.-H. = Austria-Hungary; Eg. = Egypt; Ger. = Germany; Holl. = Holland; T. = Turkey; U.K. = United Kingdom; U.S.A. = United States of America.

In addition fruits (oranges, nuts, figs, &c.) are sometimes exported in small quantities.

In 1900, 16,000 tons of wine, valued at £140,000, were exported, and the export of wine may again rise to this. In 1914 over 640,000 gallons of wine were exported, only about 6,000 gallons to Greece. In 1900 the export of raisins reached 3,300 tons worth £25,000. In the first two months of 1915 about 6½ million cigarettes, valued at £3,837, were exported. The amount and value of the olive-oil exported vary greatly: 1,200 tons is a minimum quantity; £34,800 a maximum price for any one year. During the war, when the export of olive-oil has been prohibited, the price has risen greatly. The value of the carobs exported varies between £2,000 and £8,000, and of the styrax between £950 and £2,800.

Imports are mainly as follows :

<i>Product.</i>	<i>Value. £</i>	<i>Usual Source.</i>
Grain and flour	75,000	Bulgaria, Roumania, T.
Cotton, woollen, and iron goods .	34,000	U.K., Ger., Italy.
Tobacco	20,000	Bulgaria, T., Greece.
Provisions and colonial products	20,000	U.K., A.-H., T.
Leather	15,000	Eg., Belgium, India, T.
Alcohol	15,000	A.-H., Greece, Russia, Italy.
Wood	10,000	
Cattle	6,500	Asia Minor.

Other imports are : tin sheets (for cigarette tins) ; machinery ; paper and cigarette paper ; petroleum ; sulphur (for vines) ; pine bark (for tanning) ; soap, &c.

About $\frac{1}{5}$ to $\frac{1}{4}$ of the imports before the war came from Great Britain.

A British vice-consul, besides representatives of other powers, resides at Vathy ; there is a branch of the Bank of Athens and perhaps of other banks in the same place, and at Karlóvasi is an agency of the Bank of Athens.

The shipping returns upon which the following figures are based are for 6 years between 1904 and 1912. The annual trade of Sámos was carried in 1,300 steamships with a total capacity of 412,900 tons, and in 3,480 sailing vessels of 33,000 tons capacity. The total number of vessels was thus 4,790 representing 446,000 tons. This is an average, but there was a steady rise in total tonnage to 514,000 tons in 1912, caused by the increased size of the steamers employed. The sailing-vessel tonnage on the other hand decreased.

Of the steamships (during the latter part of the period covered) $\frac{1}{2}$ — $\frac{1}{3}$ (reckoning by tonnage) were Austro-Hungarian ; $\frac{1}{4}$ Greek ; $\frac{1}{6}$ — $\frac{1}{7}$ belonged to the United States, and these showed a great increase ; $\frac{1}{9}$ — $\frac{1}{10}$ were French ; the rest were Dutch, Italian, German, British, Bulgarian, and Roumanian. Of the sailing vessels over $\frac{1}{2}$ belonged to the island ; $\frac{1}{4}$ were Turkish (mainly Greek Turks) ; and the rest mainly Greek and Italian. The Samians under the autonomous Government possessed a fair-sized fleet of both steam and sailing vessels.

British and German manufacturers found it cheapest to

ship to Piræus, Syra, or Smyrna, where transshipment took place into smaller Greek steamers. This trade is thus manifested in returns as Greek or Turkish. The wine-carrying trade before the war was almost exclusively in the hands of a Dutch shipping company.

The commercial ports are Vathý, Karlóvasi, Tegáni, and Marathókampo. The first is good for vessels of any size and in any weather. The last three are smaller but can accommodate fair-sized vessels. (For further particulars see p. 161.)

POPULATION AND SETTLEMENT

The official census of the autonomous Samian Government in 1902 placed the number of the population at just over 53,000, an increase of about 3,300 in 6 years. In 1912 an estimate gave 50,900, of whom 300 were Moslems and 350 Jews, the decline being probably due to emigration (reckoned then at about 2,000 a year). Since emigration was stopped by the Greek military conscription laws the numbers have risen to 54,182 (including about 1,500 Moslems and 200 of other nationalities). During the European war there has been a considerable influx of refugees from Asia Minor.

This population is fairly well distributed into two fair-sized townships, some 7 large villages, besides numerous smaller villages and hamlets. Practically all the settlements reveal in their positions the former prevalence of piracy. Those which have now become commercial centres have returned for the most part to the coast, leaving the old town still inhabited on the heights behind and inland. Others have so far only established dépôts on the coast for purposes of trade.

Vathý (pop. 11,885, P. T. O., C. H.) has been the capital of the island since the establishment of the autonomous Government, taking the place of the former capital, Chóra. The town is situated near the head of Vathý bay in the north-east of the island and consists of two main parts. The upper town (Áno Vathý) is built on steep slopes $\frac{1}{2}$ mile from the sea ; it is the old town. It is connected by a good zigzag

carriage-road with the lower town (Káto Vathý), which is built around the eastern side of the head of the harbour, and at the foot of sloping hills. This town is new and consists of modern well-built houses, mostly white; the streets are narrow, well paved, and fairly clean. There are some good public buildings and private residences, including that of the former Princes. The harbour is faced by a stout and long stone quay. The surroundings are beautiful and green, and the site is healthy. The town is supplied with water from two springs 2 and 4 miles distant respectively. The water is conducted to 3 reservoirs, one in the centre and one on each side of the town. The supply, however, is reported insufficient.

Vathý was the seat of the autonomous Government, and the meetings of the Samian Assembly took place there. It is now the administrative centre of the *nomós* of Sámos (which includes Ikaria, &c.; see p. 150), and the *nomárchos* and other officials reside there. It is also the gendarmerie headquarters for the island, has law courts, a *démarchos* (mayor) and deme council, and a Greek Orthodox bishop. There are several good schools (including a high school for boys), a public hospital, and other public institutions. A British vice-consul and the consular representatives of other powers live at Vathý. There is considerable trade. Cigarette-factories, tanneries, milling, and other industries employ 4,000–5,000 people. There are good shops and warehouses around the quays, and the harbour is always busy with shipping.

There is communication with most of the other villages of the neighbourhood by road and also by telephone and with the outer world by submarine cable and frequent steamship services.

Karlóvasi (pop. 6,770, P. T. O., C. H.) is the second largest town in the island. It is situated on the north-west coast in a slight indentation and at the mouth of a valley. The town consists of three parts: Palaió Karlóvasi, an old village on the steep western slope of the valley some little way inland; Méso Karlóvasi, also a little inland on the

stream; and Néo Karlóvasi, the port. The last is the newest and most important; a tramway connects all three.

Karlóvasi has a *démarchos* and deme council, gendarmerie, churches, schools, &c. It is a rising trading centre and chief seat of the tanning industry. The port has been improved artificially, and steamers call regularly. The district behind produces large quantities of grapes, wine, olives, and fruit. There is communication inland by roads, tracks, and telephone and externally by steamers.

Chóra, the former capital, is a fair-sized village (pop. 1,990) situated in a valley at the north-east corner of the plain of Sámos (Chóra). The streets are stony, steep, and unpaved, but the village has a prosperous appearance. It is connected by road with Vathý.

Tegáni (pop. 1,950) is a port on a small bay in the south-east near the western entrance to Sámos strait. The town takes its name ('Frying-Pan') from the shape of its harbour, which has been improved by breakwaters. It stands at the extreme eastern end of the plain of Sámos and near the site of the ancient capital, whose ruins, aqueduct, cistern, and fortress are still traceable. The town lies at the base of rugged hillslopes, and curves around both sides of its small harbour, which is faced with a quay. Its white houses with green shutters and its minarets recall Canea (Crete). The streets are narrow and unpaved. Near by (on the west) on a slight eminence is a large and imposing monastery built like a fortress. There is a good road direct to Vathý and another via Chóra.

Marathókampo, the fourth port of Sámos, is situated at the head of the large south-western bight. The village itself (pop. 3,585) lies some 2 miles inland on the steep broken southern face of the lateral mountain-ridge, but a *dépôt*—connected with the village by a good track—is growing up on the shores of the bay.

Other prosperous villages of the hills around the plain of Sámos (Chóra) are Mytiléne (on the north) and Mýloi (on the west). South-east of the latter, at the foot of the Ámpelos

range on the east side, is Pagóndas (pop. 2,640), and on the opposite side of the range (pass at 2,000 ft.) lies Spatharaíai (alt. 1,700 ft.). A village of note in the north part of the island is Vourliotai, between Karlóvasi and Vathý. In the extreme west, on the slopes of Mount Kerkí, are several poor villages, among them Drakaíoi, near which are mineral deposits.

PORTS AND HARBOURS

Sámos possesses three fair ports, besides several anchorages suitable on occasion. Port Vathý is the oval sheet of water (about 1 mile long (WSW.-ENE.) and $\frac{1}{2}$ mile broad (north-west to south-east)) which lies at the head of the gulf of Vathý. It is approached from the north-west by a channel about 2 miles long and is sheltered, as is also the channel, by wooded hills. The oval basin has depths of 6-20 fathoms, with shoals round the south, east, and west edges with $1\frac{1}{2}$ - $2\frac{1}{2}$ fathoms. The harbour is subject to heavy squalls from the hills, and a heavy swell sets in with north-westerly winds, but the holding-ground is good, and vessels are safe in practically all conditions. The best anchorage is in 13 fathoms, mud bottom, on the west side, in a position sheltered from the north-west by a projecting point. This point is low and sandy and has 3 wooden piers for unloading cargo on its south side. Merchant vessels lie off the town (on the east side of the harbour) in 10-3 fathoms, mud bottom. A breakwater 370 ft. long extends from a point northwards of the town and protects the water within (south-east) to some extent from the swell. The shore in front of the town is faced with a stone quay with 6 ft. of water alongside. Limited supplies of food and water can be obtained from the town, but no fuel. Water has to be shipped in open boats or by casks filled by a hydrant on the quay. There is telegraphic communication (submarine cable) with Turkey and telephonic communication with other towns of the island. Good roads lead inland.

Karlóvasi has a harbour artificially constructed by means of moles under the lee (east) of a small point about $1\frac{1}{4}$ mile west of the town. One of these moles runs NNW. for 300 yds. ;

the other starts from the small point mentioned and runs NNE. and then ENE. for 500 yds. in all and leaves an entrance 130 yds. wide. The harbour within has an average depth of 16 ft. and alongside the quay, which fronts the shore between the breakwaters, 10 ft. There is communication with Karlóvasi, where there is a telephone (and perhaps a telegraph) station.

Port Tegáni, on the south-east coast, has an artificial harbour formed by a breakwater (constructed upon an ancient mole) extending for 500 yds. from the western point of the entrance. On this breakwater are a number of stone bollards to which vessels up to the size of large steamers can make fast by the stern while loading or unloading. From a point on the north opposite this is a second mole, enclosing an inner basin. The water is 17–27 ft. deep in the outer harbour and 10–13 ft. in the inner harbour, which is lined with quays. The harbour is fairly secure, even in south winds.

The whole of the south-east coast—from about Cape Kolónnais north-eastwards as far as the entrance to Sámos strait—offers good anchorage in northerly winds, the best being about the centre of the large bay east from Tegáni, in 8 fathoms over sand and mud.

Another convenient anchorage in the neighbourhood is Port Mollah Ibrahim, a small bay near the south-east corner of the island. The water is deep, but there is good holding-ground.

The bay of Marathókampo is exposed to the south and is also subject to squalls from the mountains on the north, and these squalls are dangerous even in moderate northerly winds. The water is deep close in, but there is an anchorage $\frac{1}{2}$ mile from the shore in 4–5 fathoms. A small harbour, with a depth of about 13 ft., has been constructed by means of two breakwaters, 80 and 300 yds. long respectively. Water can generally be obtained here.

COMMUNICATIONS

Before the war Sámos was well provided with maritime communications. Austrian Lloyd steamers called twice

weekly and made connexion with Smyrna, Piraeus, and Trieste. The *Messageries Maritimes* called fortnightly, connecting with Egypt, Cyprus, Syrian ports, Smyrna, and Marseilles.

Four lines of Greek coasting steamers called weekly, connecting with Syra, Piraeus, Vólo, and the neighbouring Aegean islands. Vessels of two Italian steamship lines visited Sámos fortnightly, one plying between Italy and Alexandria and calling at Smyrna, Rhodes, Kós, and Syrian ports, and the other making the round of all the Levantine ports. A line of Turkish steamers made communication with Smyrna and adjacent islands. In addition there were occasional Dutch, German, British, Bulgarian, Russian, and other cargo boats, besides sailing vessels. All the steamers above mentioned called at Vathý, and the Greek lines called also at Karlóvasi and Tegáni.

Two submarine cables are laid from Vathý, one to Scalanova on the opposite (Turkish) coast of Asia Minor and one to Chíos. The former of these probably has been cut during the European war.

Within the island there is a good telephone system connecting all the principal towns and villages, and there appears also to be a line of overland telegraph between Vathý and Karlóvasi.

In 1910 the Samian Government granted a concession for the building of a railway between Vathý and Karlóvasi with a 99 years' lease to the contractors. This railway has probably not been built.

The absence of Turkish rule resulted in much greater activity in public works of all kinds in Sámos than in islands under Turkish sway. Foremost amongst these works was the construction of good roads. In 1899 an Italian contractor undertook to construct carriage-roads all over the island for the sum of £27,700. Some of these were made. The Princes interested themselves in the making of others. The chief stretches of good road lie in the eastern part of the island.

Route 1.—From Vathý a good metalled carriage-road goes south, mounting low hills with easy curves, and bending SSW. slopes down past the west end of Mesókampo plain and thence south-west across further easy hills to Port Tegáni (about 5 miles in all).

Route 2.—From Port Vathý a good metalled carriage-road goes SSW. across the head of Vathý bay and then mounts easy hills (alt. about 1,000 ft.), bending west and then south-west, and reaches Mytiléne village (mile 5). From Mytiléne road goes south, mounting col, and descends with many winds to cross valley and stream and then ascends slightly to Chóra (mile $6\frac{1}{2}$). From Chóra there are two roads : (i) ESE. across low hills to Port Tegáni (mile 9). (ii) WNW., winding across hills and then the high spurs of Ámpelos to Pýrgos (mile 13).

From the last-named road a cart-track branches south-west about 1 mile after Chóra and goes across the low hills west of plain of Sámos (Chóra) to Mýloi village ($3\frac{1}{2}$ miles from Chóra).

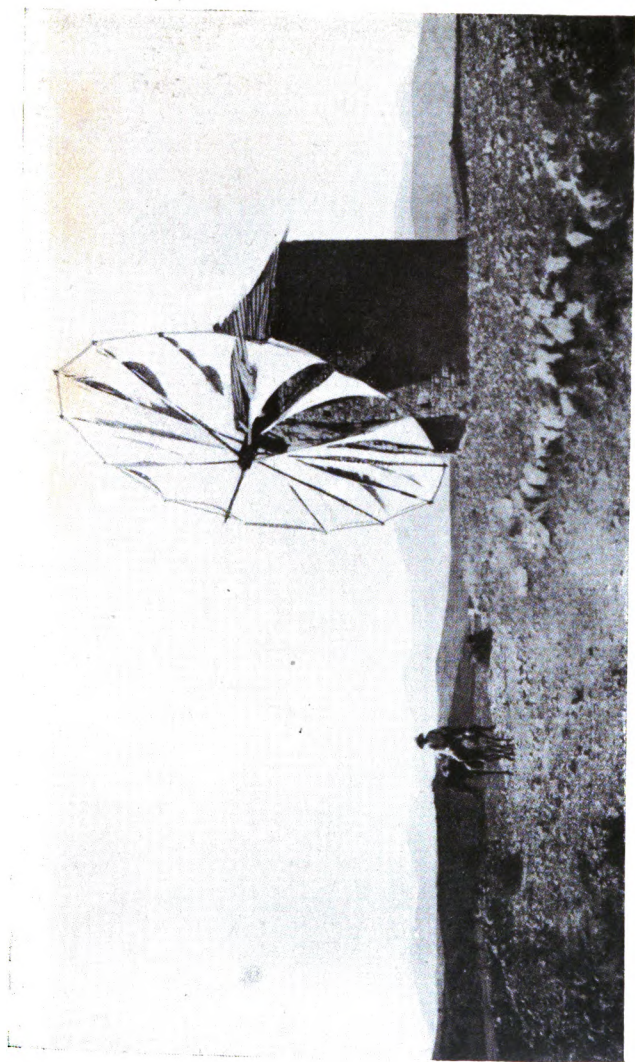
Route 3.—From Vathý cart-tracks lead in various directions to bays on the coasts of the eastern peninsula, notably to Port Mollah Ibrahim (about $5\frac{1}{2}$ miles). Another follows the western side of Vathý bay north-west and then keeps along the coast in the direction of Karlóvasi as far as Avlákia (about 8 miles).

In the western part of the island a good cart-track leads inland from Karlóvasi up the valley to Plátanos (5 miles) and thence across the range to the south. A track also joins Karlóvasi and Marathókampo.

The mule-tracks of Sámos are not difficult except in the extreme west (Mount Kerkí) and on the south side of the ridge behind Marathókampo, which is steep-faced on the south. But the tracks are liable to suffer badly from rains.

Carriages are available in Vathý, and horses, mules, and asses are used for transport.

PLATE VIII



SÁMOS: track over eastern hills.

(To face p. 164)

IKARÍA

(WITH PHOÚRNOI ISLANDS)

PHYSICAL FEATURES

This island, more commonly known under its modern name, Nikariá, is one of those which, lying towards the mid-Aegean channel, can hardly be assigned definitely on geographical grounds to Europe or to Asia. In this respect it resembles Astypálaia to the south and Hagiostráte to the north of it, but more accurately it appears from its position to be analogous to Lémnos, forming part of an erstwhile land-bridge stretching from the Mykale peninsula (Samsun Dag) and Sámos on the east to the Mýkonos-Ténos-Ándros-Euboea chain on the west, just as Lémnos appears to be a fragment, if not the keystone, of a similar inverted arch extending from the Gallipoli peninsula to that of Chalcidice. From Sámos, which lies due east of its eastern extremity, Ikaría is separated by a strait about 12 miles broad, and from the Phoúrnoi islets, the nearest land, on the south-east, by a channel of about 6 miles. Between Ikaría and Mýkonos (ESE.) is a sea-interval of some 29 miles, though one or two rocky islets (Dragonési and Stapódia) eastwards of Mýkonos reduce the distance to the nearest land on the west by 6-7 miles.

The 100-fathom line which follows the north coast of Sámos to its western end and then dips southwards towards the Phoúrnoi islets mounts northwards about 2 miles off the east coast of Ikaría and bending around Cape Phanári (the north-eastern extremity of the island) follows the north coast at a distance of $1\frac{1}{2}$ - $2\frac{1}{2}$ miles. On the south the 100-fathom line which skirts the western side of the Phoúrnoi islets appears to end some 7 miles south of Ikaría, and off the south and west coasts are deep waters. The submarine slopes of the island are steep, and, except for a few sandy stretches, with 1-4 fathoms, in the coves of the north and south-east coasts, the coastal waters rapidly deepen to 50 fathoms within 1 mile of the shore.

Ikaria has a long-drawn-out sinuous shape and on the map looks like a sea-slug wending its way north-east. The western part is the broadest and consists of a parallelogram whose longer sides (about 10 miles) face south-east and north-west and the shorter (about 6 miles), north-east and south-west respectively. To the north-east corner of this is attached an oblong whose shorter sides (about 4 miles) face north and south, and from the east side of this oblong runs north-eastwards a 7-8-mile-long symmetrical land-strip like a handle, which terminates in a narrower promontory like a finely carved knob. The divisions above indicated are so regular and so clearly marked in the outline that they have long been used as a basis for political demarcation. The breadth decreases continually from south-west to north-east: in the south-west it is about 6 miles, in the central portion $5\frac{1}{2}$ - $4\frac{1}{2}$, while the eastern 'handle' has a uniform width of about $3\frac{1}{2}$ miles but narrowing slightly towards the north-east. The extreme length (Cape Pápas in the south-west to Cape Phanári in the north-east) is roughly 25 miles. The area is estimated at about 90 square miles.

The coasts are closed and singularly devoid of striking features, long stretches on the west, north-west, and south-east being as nearly straight as a rocky coast can be. Other than a few coves along the central northern and the eastern coasts, there are no openings. In the parts mentioned are stretches of sandy beach, the largest being that bordering Pháros bay on the north-east; elsewhere the coasts are rocky and in places, especially towards the south-west, cliff-bound, with low off-lying rocks.

A chain of mountains with the collective name, Aethéras, stretches from end to end of the island with long flat curves in the south-west but in a straighter line towards the north-east. It lies throughout its length close along the south coast, which follows its curves closely at a distance of 1-2 miles. Though crossed by several fairly easy passes, its sharp undulating crest forms a continuous barrier whose principal summits are scattered fairly evenly along its length. Two of the

highest peaks occur in a massive group towards the north-east (about 3 miles east of *Hágios Kerýkos*): these are *Phárdys* (3,420 ft.), the highest point in the island, and *Hypsilís* ('Lofty'; 3,366 ft.). About 2 miles south-east of the latter is Mount *Atschides* (3,195 ft.), while in the south-west are *Mélissa* ('Bee'; 3,383 ft.), *Pýrgos* ('Tower'; 2,287 ft.), and *Hypsonás* (2,287 ft.). On the south this chain falls away with abrupt slopes to the coast, furrowed by numerous steep ravines. On the north the slope is gentler, and innumerable spurs running northward fill the space between the island backbone and the north coast with ridges and isolated hills. The mountains sink lowest towards the north-east, and Cape *Phanári*, though prominent, is fairly low. All the west coast on the other hand is faced by an irregular range of hills running north and south and forming a wild tangled region. The mountains of *Ikaría* are occasionally visible from as far off as *Syra*, and close at hand they have a wild and rugged appearance.

There are only two plains, both small. One is near the north-eastern end of the island, the other backs an open bay on the central north coast. A good deal of the northern hill-country, however, is low and soft-featured, and there are elevated plains and basins reaching up south to close under the mountain-spine. Chief of these are the hollows of *Pési* in the central south-west and that known as *Priest Philip's* plain (*τοῦ Παπα Φιλίππου τὸ κάμπι*) in the centre.

The mountain-spine is the main watershed, the western north-to-south hill-range being a subsidiary one. The streams take their courses straight from these divides to the coasts, those on the south and west being extremely short, those on the north-east longer, while those on the west, flowing from under Mounts *Mélissa* and *Pýrgos* to the north coast, are longest. They are all dry in summer but liable to sudden and dangerous floods in winter; the two large western ones in particular are noted for this, the *Chálaris* having blocked its mouth with uprooted trees from the heights above. The wooded hill-slopes and the valleys abound in springs, and the island has an abundant supply of good fresh water.

GEOLOGY, CLIMATE, AND FLORA

Little appears to be known of the geology of Ikaría, but the mountains probably consist of a massive blue limestone covering laid over a basal layer of argillaceous and mica schists, with granite also in places (e.g. in the south-east). At the foot of the mountain-chain in the east, in the neighbourhood of Hágios Kerýkos, are two localities with hot springs. Under the monastery of Panagiá Evangelistria (north of Hágios Kerýkos) there are two with temperatures of 117°–126° F. and 95°–104° F. respectively, the former being much the stronger. Both are impregnated with sulphur, saltpetre, manganese, and sodium salts. North-east and south-west from Hágios Kerýkos along the coast are other hot springs, that to the north-east in a cave at sea-level, another lying in a flat place 100 yds. inland. These all colour their surroundings with red and green deposits.

In the same locality iron ore (haematite) occurs, and the island also contains emery and probably other minerals.

Statistics for the climate are lacking. In its general features the climate probably resembles that of neighbouring islands to east and west, local variations being mainly due to the high mountain-ridge and the presence of forests. Ikaría lies athwart the prevailing Aegean winds (north to north-east in summer and north-east and south-west in winter). The north side of the island is therefore cooler and moister than the south, and the uplands give rise to alpine temperatures at higher levels. Snow lies on the main range in winter. (See also note on 'Climate', p. 177.)

There were formerly considerable forests on the lower and middle hill-sides, but these have been much reduced by charcoal-burners. The trees are probably oaks, beeches, firs, and planes in the valleys, and there is also the scrub (arbutus, myrtle, &c.) usual on Greek hills, besides trees of cultivation.

HISTORY, ADMINISTRATION, AND INHABITANTS

Its remoteness and wildness, but still more the inhospitality of its coasts, removed Ikaría from the main course of history;

and the island has had a quiet and even obscure existence. As part of the Athenian maritime empire, two of its towns paid tribute to Athens, and it was noted for its wine. In succeeding centuries it fell nominally into the hands of the successive conquerors of the archipelago (there are mediaeval ruins, probably Genoese, on the plain in the north, south of Évdelos), but the islanders seem to have earned a name for barbarism and wildness which caused them to be left largely alone. Even pirates found here few settlements worth plundering and no havens in times of storm or pursuit. After the Greek War of Independence Ikaria remained in the hands of the Turks. The Turks left the island pretty well alone, and beyond the payment of an annual tribute of about £200 to the Turkish governor of Rhodes and gifts to the Greek Orthodox bishop of Sámos (their spiritual overlord) the islanders had little dealing with their masters. Their leisure they spent in faction of the true ancient type—land-owner versus peasant—the former resisting and dreading the desires of the latter for agricultural improvement. About the middle of last century this strife culminated in a deadlock and an appeal to the Turkish Government, who then organized its administration and tightened the reins. The island, as a *kaza* belonging to the Turkish sanjak of Chíos, was governed by a *kaimmakam* subject to the *vali* of Rhodes. The cost of the administration fell upon the inhabitants, and in addition they paid taxes (capitation tax and customs duties) and a yearly tribute to the archbishop of Sámos. These burdens amounted to about £1,000 annually. There was a measure of local government, and the Ikariots did not fear on one occasion to murder one of their governors.

In the present century Ikaria, though it had been popularly grouped with the Dodecanese since the Greek War of Independence, was not occupied by the Italians in the Turko-Italian war, but was seized by the Greek navy at the outbreak of the Balkan wars (1912). The Treaty of London (May 1913) left the decision as to the fate of the island, along with that of the other islands of the northern Aegean occupied by

Greece, to the Great Powers. These (February 1914) adjudged it conditionally to Greece, by whom it has since been occupied. The island appears to have been at first administered directly from Athens by a special commissioner, but it now forms part of the *nomós* of Sámos.

The island climate is extremely healthy, and its fresh air and pure water breed a fine sturdy race of men, who live often to extreme age. They live as simply as do most island Greeks on a fare mainly vegetarian (potatoes, lentils, vegetables) with milk, cheese, and a certain amount of meat (mutton and goat-flesh). They drink wine much diluted with water and a little spirits. The dress of the peasants is of the Greek island type—short breeches, open vest and sometimes open coat with shirt beneath, and often high boots like the Cretan boots. The woman's attire is extremely simple. In the towns European fashions are coming in. Ikariots had formerly a name for savage wildness. This trait was, however, much exaggerated. The peasants are a simple, hardy, and even primitive people, not without enterprise and force of character, probably resembling the Andriot peasants in character, and like them somewhat boorish and dour. They are patient and industrious, and the women have to do a good share of heavy work. Civilizing influences come chiefly from Sámos, and the dwellers in the east are more forward culturally than those in the west. The extreme west indeed is a wild and remote hill-region, and here primitive customs and manners remain almost undisturbed. In these parts the houses consist of one single room, with earth floor, flimsy wooden roof, and rough openings for windows and a door. The whole family live inside, and sometimes two and even three families occupy the same abode.

The manners are primitive, but food is plentiful, of good quality, and the people hospitable. Beds, knives and forks are not commonly used in this region, but they, as well as more modern dwellings and customs, have long been common in the larger settlements. The people are not without their local politics, parties, and feuds, but loyalty to their island

and fellow islanders takes precedence of all other feelings. Both men and women go abroad a good deal but nearly always return ultimately. Like other islanders they are superstitious and very fond of festivities, ceremonies, and dancing. Their language shows some dialectical peculiarities.

INDUSTRIES

Agriculture, forest and pastoral pursuits are the most important. Of recent years a little mining has been carried on, and there is a certain amount of seafaring. The island is rapidly increasing in commercial importance, as is seen by the fact that three steamship lines now call weekly.

The plains and hilly lowlands and plateaus of the north—particularly the plain of Pháros in the north-east, the Messareá district comprising the plain of Kámpos in the central north, and the upland plateau of Pési in the south-west—are all extremely fertile and capable of great production. The last-named region is perhaps that from which the famous Pramnian wine of antiquity came, and it as well as the others mentioned are to-day covered with vines producing grapes from which first-class black raisins are made. Another product of the rich soil is potatoes. These were introduced at the beginning of last century, and Ikaría soon became famous among the islands for its potatoes—an uncommon product in the Aegean and produced in quantity only by Náxos besides, and by one or two other islands (e.g. Donoúsa) in small quantities. The village houses and the narrow, rough, and steep but warm and well-watered ravines of the south side have small but rich gardens growing olives, figs (two varieties), northern fruits (pears, cherries), nuts, citrons, lemons, and oranges. These gardens are often contained by stone walls, and cypress and other ornamental trees lend the native hamlets beauty and distinction. Corn and olives appear not to be produced in quantity.

Formerly, when the forests on the middle slopes of the mountains were thick, charcoal-burning was a great industry,

but the exhaustion of the forest has driven the charcoal-burners to the mainland (Asia Minor) coasts.

Cattle-rearing is fairly important. Flocks of goats and sheep are allowed to wander over the hills untended, the animals being branded on the forehead. Oxen, a few mules and asses, and pigs (the numbers of which have tended to decrease) are also kept. Bee-keeping is also common, and honey and wax are among the island products.

Emery occurs and was formerly worked, but since the institution of the Greek Government monopolies and the development of the Náxos emery mines the export has fallen off and has now ceased. The iron deposits near Hágios Kerýkos were worked for a time, a concession having been granted to a private (Greek) company in 1910. The ore contained 48 per cent. of iron, but the quantity produced was small, and the mine has probably ceased working. The mineral resources of the island may be considerable, but they remain to be discovered and exploited.

In the two ports (Hágios Kerýkos and Évdelos) there is a fair amount of trade and shipping connected with the export of island products and import of necessities. The men of Ikaria carried their charcoal and potatoes in their own vessels to all the ports of the Aegean, but the exposed nature of the coasts does not encourage fishing. A good many of the men are continually abroad as seamen, and the young women serve as nurses or maid-servants in the mainland cities, most of them ultimately returning to the island.

The island production of raisins 20 years ago was reckoned at nearly 400 tons; the goats at 12,000 head; sheep 1,500; cattle 500; pigs 500, besides a few asses and mules. These figures have no doubt now been considerably enlarged, especially for agricultural production, but no recent statistics are available. The exports are chiefly potatoes, fruit (mainly citrons and figs), and raisins, and the imports the usual manufactured goods and colonial wares (tea, coffee, sugar, &c.).

POPULATION AND SETTLEMENT

The population according to a Turkish estimate was 12,800 in 1892; recent Greek estimates (1912) place it at about 15,000, all Greeks. A traditional division of the island is into three parts: Phanáron (Drákanon) in the north-east; Messareá in the middle; and Peramereá (Ráchai) in the south-west. These divisions correspond roughly to geographical areas (see above), but their main significance appears to have been political or social. The north-eastern district is the most forward and civilized; Messareá is the richest; the western district the wildest and most backward.

There are 60-70 hamlets, some of which are grouped together to form a nominal village. The settlements are mostly small and scattered, and there are only two or three of any importance; the population is thus well distributed. The principal centre is **Hágios Kerýkos** (pop. 1,800, P. O., C. H.) on a small inlet on the east coast facing Sámos and under the shelter of the mountain-range. It was in Turkish times the seat of the administration and probably is the same under the present Greek régime. It is the export and import centre of the eastern district, has a small port and communication by steamer with Sámos and Piræus. In the neighbourhood are iron mines (not now worked) and hot springs visited by Samians and other Greeks for their medicinal properties. The town lies at the foot of a ravine descending from the mountains above, and higher up this ravine is the monastery Panagiá Evangelístria, founded in 1725 from Chíos and noted for the hospitality of its monks and for the thermal springs in the vicinity. Hágios Kerýkos is connected by tracks with other villages of this district, chief of which are: Pýrgos (Hierón) on the fertile plain near the north-eastern extremity, with ancient Hellenic remains; Liváda and Gérontas on the northern spurs. The centre of the Messareá district is Évdelos on a small bay about the middle of the north coast. Steamers call here, and behind lies a rich agricultural district with numerous villages. Évdelos itself lies on the hills $\frac{1}{2}$ hour

from the port, but the latter is growing in importance. In the vicinity are mediaeval ruins. The villages to the south among the hills, 10–12 in number, vary in size and are designated by the collective name of Méssara. South-west of Évdelos is the monastery of Hágia Theoktísti, founded from Mytiléne. The district of Peramereá contains in the centre some 6 or 7 hamlets grouped under the common name Ráchai, besides others, and along the western face of the north-to-south hill-chain a row of hamlets (Amalou, Langadás, Mavriiánni, Kyniádes, &c.) faces the eastern sea in a remote and wild region.

PORTS, HARBOURS, AND COMMUNICATIONS

Ikaría lies athwart the prevailing Aegean winds (north, north-east, and south-west) and in addition has no good harbours. A few coves along the north and south coasts offer limited shelter under favourable conditions, but such havens are apt to be treacherous with a sudden change of wind. The high and closed chain which skirts the south shore of the island makes a large wind-shadow in northerly gales, and sailing vessels which run into this for shelter find themselves suffering from a heavy swell with no means of making way. The two small coves at Hágios Kerýkos and Évdelos are used by the coasting steamers, and the best anchorage in northerly or westerly gales is north of the curving sandy beach 2–3 miles south-west of Cape Phanári, where there are 5 fathoms about 400 yds. out.

Three Greek island steamship lines now call regularly at Ikaría, all apparently touching at Hágios Kerýkos and one (and perhaps the other two also) at Évdelos. These boats call weekly, outwards and inwards, connect the island with Piræus, Syra, Sámos, and the neighbouring islands, and carry cargo, passengers, and mails. There are also a good many native sailing craft going to and fro between the island and its neighbours.

There is no submarine cable, telegraph, or telephone. The

inland tracks are rough and mountainous, and Hágios Kerýkos, though connected by bridle-paths with the rest of the island, is cut off from the north by the mountain-chain.

PHOÚRNOI ISLETS

These islets (12 in all, counting rocks) form a group 3–5 miles south of the strait between Sámos and Ikária and about equidistant (4–5 miles) from these two islands. Only two are of any size, and the whole group covers only about 25 sq. miles. The group lies within the 100-fathom line but is surrounded by deep water (60–42 fathoms), which comes close in. The coasts are mostly rocky, high, and distinguished by numerous open-mouthed caves whose appearance, resembling ovens, has given the group its name (*φούρνος* = 'oven'). The largest island, Hágios Menás, has a curious shape: one section, a long thin strip, runs NNW.–SSE. in a straight line for about 6 miles, while to its north-east side is attached by an extremely narrow neck a crescent, convex towards the east and broader at its north end, and extending northward (beyond the south-west portion) for another 3 miles, the whole having the appearance of a battle-axe. The coasts are everywhere fantastically irregular, being bitten into by innumerable rugged coves. West of this islet lies Thémína, the next largest, triangular in shape with a sharp-pointed extremity running out west. The other islets and rocks are much smaller and lie strewn around the larger ones, mainly on the east and south, at distances of from $\frac{1}{2}$ to 2 miles. All the islets are rocky, and the larger are formed by ranges of hills following the general shape of the outlines. At the north end of Hágios Menás these hills rise to 1,591 ft.; in Thémína one hill reaches 1,585 ft. The hills, as well as the islet rocks, have sharp and rugged outlines with numerous conical peaks.

The group belongs to Greece, having been occupied along with the other eastern Aegean isles; they form part of the *nomós* of Sámos. Socially the islands are connected mainly with Sámos and Pátmos, though Ikariot seamen take shelter

in the coves. The islets are poor and produce only corn, pigs, some honey, and rabbits. The shepherds of Sámos take flocks there in spring. The coasts are said to abound in fish. Hágios Menás has good marble, and in ancient days this was exploited by the Samians. In the northward-facing bay on the west side formed by the coming together of the two sections of Hágios Menás is a small village, near to which are ancient remains. This is the only settlement. The water-supply is reported good, and in the vicinity are marble quarries.

In spite of their indented coasts these islets have few good harbours, as the coasts are too rocky and high and the water too deep. The best anchorage is in a small bay called Mármaro or Marmarokopió ('Marble Quarry') bay on the west coast of Hágios Menás (southern section). Owing to its convenient position opposite Hágios Kerykos this bay is much used by Ikariot sailing craft. The larger bay to the north (on which the village stands) is open to north gales and has a rocky bottom. The navigation of the waters about this group is difficult.

CLIMATE OF NORTHERN AND EASTERN AEGEAN ISLANDS

THIS note is based upon information given in the *Handbook of the Climate of the Eastern Mediterranean* (I.D. 1117, Chapters I and II), supplemented by such other data as are available for specific islands. For the fuller treatment of the subject—and particularly for an understanding of the climatic relations between this area and that of the Balkans and Asia Minor in general—reference should be made to that handbook. For the climatic relations of the areas treated below with those of Greece Volume I (Chap. II) of this handbook may be consulted. For convenience the tables of climatological data for the north and east coasts of the Aegean (including those of Constantinople, which are similar) have been reprinted below from the first-mentioned volume.

GENERAL REMARKS

The climate of the Aegean Sea is typically Mediterranean, being characterized by a hot dry summer and a mild winter with considerable rainfall.

In the Aegean the four seasons are not of equal importance or duration : spring and autumn are less definitely marked and form short transitional periods between winter and summer. Thus April and May are a transition period between winter and summer, while October is a shorter period in which winter conditions replace rather quickly those of summer.

In summer the temperature is generally high, and little, if any, rain falls ; the country becomes sunburnt and dried up, and in rocky valleys where the northerly winds are not felt the temperature is often much higher than on exposed hills and coasts. Northerly winds predominate and blow with

great steadiness. Haze is frequent, and visibility is usually much below that of cooler months. Daily alternation of land and sea-breezes is well developed.

In winter the temperature is never very low, but slight frosts occur occasionally. The days are pleasantly warm except during northerly winds. Winter is the rainy season: from November to February rain falls frequently, especially on the west coast of Asia Minor. The rainfall of the eastern coast of Greece is markedly less. The rain falls during the passage of cyclonic systems, which pass frequently from west to east (see below). As spring approaches these depressions tend to follow more northerly tracks, and the rainfall diminishes towards the summer minimum. Snow falls occasionally but soon melts. These winter depressions are generally accompanied by gales and unsettled weather generally. With the approach of the depression violent southerly winds prevail; then there is usually a brief calm followed by strong north-westerly winds. On other occasions strong southerly winds may continue for 3-4 days without the above-mentioned cycle occurring, and again northerly and north-easterly winds, amounting often to gales, may blow. Gales nearly always come from north-east to north-west or from south-east to south-west. Easterly and westerly winds are seldom strong. The coastal waters of many islands are troubled by sudden gusts which swoop over heights and down the steep coasts which bound them. These gusts are highly dangerous to mariners.

ISLANDS OF THE NORTHERN AEGEAN

The northern shore of the Aegean has a climate which represents a transition between Balkan and Mediterranean (Aegean) conditions. The data referring to this climate are given below, together with those for Constantinople, where the conditions are very similar; but allowance of course must be made for purely local features in the climate of individual islands.

The climate of the islands of the northern Aegean approxi-

mates to that of the Macedonian coast—more particularly to that of Kavalla—but with an inclination towards the Aegean character in proportion as they are farther south, and to more purely insular conditions in proportion to their distance from the mainland coasts. Thus Thásos has perhaps the least and Lémnos the most markedly insular character. Further the climatic condition of the islands varies with their varying configuration, the contrast between Samothráke and Lémnos being perhaps greatest in this respect. As a rule only the general features are emphasized below, particular conditions (so far as they are known) being given under the individual islands.

Summer temperatures in these islands reach 85°–95° F., though it may be hotter in sheltered valleys and on calm days. August is usually the hottest month, though July approaches it in this respect. The coldest month is January, and temperatures may then sink to 22°–25° F. Frosts, however, are infrequent and of short duration; they occur in January and February. Blizzards sometimes occur, but snow does not lie long except in the north and where there are high mountains (e.g. Thásos). The climate is of course more equable than on the mainland: the mean summer temperature is about 78° F. and the mean winter temperature 44° F. (N.B.—The waters of the Mediterranean are 4°–8° F. above the temperature of the Macedonian coast towns.)

The annual rainfall amounts to 23–25 inches, more where, as in Thásos and Samothráke, there are forests or high mountains. The rain falls mainly in December to February (when it may amount to 3 inches in a month), lighter showers continuing into spring. Summer is dry except for occasional thunder-showers. In winter there are on an average 8–10 days in a month when rain falls.

All of these northern islands suffer greatly from the winds: there are very few days without any wind, and more often than not the winds are strong. Calm days are least frequent in winter. The winds are also extremely variable, Thásos

and Samothráke suffering most in this respect. In summer easterly winds on the whole prevail; in Ímvros north-easterly winds blow steadily, while in Thásos they are mainly from the east, and also from the south-east. These winds often amount to a gale. South-westerly winds also occur in summer. In winter the winds come mainly from the south to south-west and north to north-east (in the northern parts also from the east). They are usually sudden in onset, violent, rain-bringing and have short spells of treacherous calm between changes of direction. They often last 3-4 days. Westerly and north-westerly winds are infrequent. The northern winds, which come from the Balkan highlands, are extremely cold in winter and cool in summer.

ISLANDS OF THE EASTERN AEGEAN

The islands of the eastern Aegean stand in the same general relation as regards their climate to the continental climate of the highlands of inner Asia Minor as the islands of the northern Aegean do to the Balkan highlands. Their climate represents a transition from the western Asiatic to the Aegean conditions. The climatological data for Smyrna have been given, and they furnish a comparison with those of Sámos. It must be remembered, however, that the western coast of Asia Minor has strongly marked mountain and valley features, and the conditions prevailing along it are much modified in detail by local circumstances. This applies in a less degree to the islands, but even their conditions are influenced by local topography. Thus the position with regard to the mainland (e.g. Ikária and Chíos in this respect as contrasted with Mytiléne and Sámos) and the possession of high mountains (e.g. Ikária, Chíos) must be taken into account. Also the more southerly position of, for example, Sámos makes a slight difference. As a whole the group is milder-featured climatically and warmer than the northern group.

Summer temperatures mount to 80°-90° F., an average being 70° F.; June, July, and August are all hot months.

Towards the end of autumn there is a fairly rapid fall to winter temperatures, which reach a minimum of 18° – 20° F. in January. Such extremes are rare, an average winter temperature being 45° F. Snow occasionally falls but soon melts. The extremes of heat and cold are much modified by sea-breezes.

The annual rainfall is $25\frac{1}{2}$ – $27\frac{1}{2}$ in., but it varies greatly under the influence of conditions prevailing in the interior of Asia Minor. In Mytiléne the range is from $17\frac{1}{2}$ in. to 41 in. The rain falls mainly between November and February, but the months of heaviest rainfall and the maximum amount (7–9 in.) in any given month vary in different islands. In Sámos July and September are without rain, summer rainfall in all the islands being chiefly due to thunderstorms.

Winds probably more than any other climatic feature of these islands depend upon the configuration of the neighbouring mainland coasts, but these islands do not suffer nearly so much from wind as do those of the northern group. There are occasional disastrous storms but a much larger proportion of calm days, these, however, being mainly in winter and few in summer. In spring, summer, and autumn there is a marked predominance of northerly winds, mainly north-easterly. In winter the winds are more variable but appear to come prevailing from the mainland (i.e. east, south-east) and from the south. Many local variations are introduced by the shaping of the adjacent coasts and channels, but Ikaría probably approximates more to the northern islands in respect of its winds. This island is also notorious for its land-gusts falling over on its southern side. The climate of these eastern islands is generally allowed to be delightful for human beings—mild, cool, and invigorating.

TABLES

The position of the meteorological stations is as follows :

Group I :

Constantinople : altitude, 246 ft. ; latitude, 41° 2' N. ; longitude, 28° 28' E.

Kavalla : altitude, 39 ft. ; latitude, 40° 55' N. ; longitude, 24° 22' E.

Salonica : altitude, 7 ft. ; latitude, 40° 39' N. ; longitude, 22° 57' E.

Group II :

Smyrna : altitude, 33 ft. ; latitude, 38° 25' N. ; longitude, 27° 0' E.

Sámos : altitude, 230 ft. ; latitude, 37° 40' N. ; longitude, 26° 45' E.

MEAN TEMPERATURE

(in degrees Fahrenheit)

		<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Group I :							
Constantinople	. .	41	41	46	53	62	70
Kavalla	. .	42	44	49	57	68	74.5
Salonica	. .	41	45	49	58	68	76.5
<i>Mean</i>	. .	41.3	43.3	48.0	56.0	66	73.7
Group II :							
Smyrna	. .	45.6	47.6	51.2	59.5	69.2	76.4
Sámos	. .	48.6	51.3	51.6	59.2	67.6	73.8

MEAN MONTHLY MAXIMUM TEMPERATURE

(in degrees Fahrenheit)

		<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Group I :							
Constantinople	. .	57.6	57.9	67.3	75.0	84.7	89.4
Kavalla	. .	58.3	58.5	62.4	73.0	81.1	86.7
Salonica	. .	60.1	63.3	68.3	77.5	87.1	94.1
<i>Mean</i>	. .	58.7	59.9	66.0	75.2	84.3	90.1
Group II :							
Smyrna	. .	67.1	67.6	71.9	82.0	90.6	98.0
Sámos	. .	61.7	62.4	65.5	78.6	81.5	86.7

<i>July.</i>	<i>Aug. •</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
74	74.5	68	62	53	46	Group I :
78	79	71	62	53	48	Constantinople.
80	79	72	63.5	52	48	Kavalla.
						Salonica.
77.3	77.5	70.3	62.5	52.7	47.3	<i>Mean.</i>
80.9	82.0	75.0	65.8	58.1	51.8	Group II :
78.8	78.1	72.5	66.9	59.0	52.5	Smyrna.
						Sámos.

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
90.0	90.1	84.7	78.1	69.6	61.9	Group I :
91.9	94.3	86.9	76.6	68.5	61.2	Constantinople.
98.2	99.1	91.9	82.0	70.0	62.6	Kavalla.
						Salonica.
93.4	94.5	87.8	78.9	69.4	61.9	<i>Mean.</i>
100.2	102.3	95.3	87.2	79.8	68.1	Group II :
91.2	90.8	87.8	81.8	72.3	64.9	Smyrna.
						Sámos.

MEAN MONTHLY MINIMUM TEMPERATURE

(in degrees Fahrenheit)

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Group I :								
Constantinople	.	.	28	26	31	37	46	54
Kavalla	.	.	23	29	35	41	52	60
Salonica	.	.	24	27	33	40	50	59
<i>Mean</i>	.	.	25	27.3	33	39.3	49.3	57.7
Group II :								
Smyrna	.	.	25.0	28.3	33.4	37.9	50.1	59.3
Sámos .	.	.	32.0	37.9	37.7	43.0	54.8	61.2

MEAN MONTHLY RAINFALL

(in inches)

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Group I :								
Constantinople	.	.	3.42	2.72	2.44	1.65	1.18	1.34
Kavalla	.	.	2.80	3.42	2.72	1.93	2.05	1.65
Salonica	.	.	1.26	0.87	1.10	1.61	1.73	1.85
<i>Mean</i>	.	.	2.49	2.34	2.09	1.73	1.65	1.61
Group II :								
Smyrna	.	.	2.79	2.61	3.21	1.12	0.88	0.38
Sámos .	.	.	5.43	5.51	4.56	1.14	0.98	0.19

RELATIVE HUMIDITY

			<i>Jan.</i>	<i>Feb.</i>	<i>Mar.</i>	<i>April.</i>	<i>May.</i>	<i>June.</i>
Group I :								
Constantinople	.	.	74	71	62	57	57	53
Kavalla	.	.	84	85	83	83	81	79
Salonica	.	.	70.8	71.3	68.3	66.1	64.3	60.7
<i>Mean</i>	.	.	76.3	75.8	71.1	68.7	67.4	64.2
Group II :								
Smyrna	.	.	69	71	68	63	62	58

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
61	60	53	48	38	33	Group I :
64	64	53	48	36	33	Constantinople.
65	61·5	54·5	45	32	26	Kavalla.
						Salonica.
63·3	61·8	53·5	47	35·3	30·7	<i>Mean.</i>
						Group II :
63·1	65·8	56·6	45·6	34·7	33·2	Smyrna.
67·6	66·4	58·4	53·6	44·9	34·7	Sámos.

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
1·06	1·65	2·05	2·52	4·02	4·80	Group I :
0·71	2·16	1·34	0·87	2·72	3·23	Constantinople.
0·79	1·02	1·14	1·73	1·97	1·97	Kavalla.
						Salonica.
0·85	1·61	1·51	1·71	2·9	3·33	<i>Mean.</i>
						Group II :
—	0·43	0·52	0·81	3·36	3·72	Smyrna.
—	0·11	—	1·92	5·43	7·75	Sámos.

<i>July.</i>	<i>Aug.</i>	<i>Sept.</i>	<i>Oct.</i>	<i>Nov.</i>	<i>Dec.</i>	
53	53	55	63	71	74	Group I :
75	75	78	82	84	85	Constantinople.
54·2	57	62·4	71	73·6	74·5	Kavalla.
						Salonica.
60·7	61·7	65·1	72	76·2	77·8	<i>Mean.</i>
						Group II :
50	48	59	66	74	77	Smyrna.

NUMBER OF RAIN DAYS
(≥ 0.2 mm. or 0.008 in. of rain)

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Group I : Constantinople, Kavalla, Salonica.
Group I : Constantinople	12.0	11.0	10.0	8.0	6.4	4.6	2.9	3.5	6.1	6.5	11	14	14
Kavalla .	6.0	10.0	8.0	6.0	6.0	6.5	4.3	4.3	4.5	3.0	8	9	9
Salonica	6.0	6.0	6.0	7.0	6.0	6.0	4.0	3.0	3.5	6.0	7	8	8
Mean	8.0	9.0	8.0	7.0	6.1	5.7	3.7	3.6	4.7	5.1	8.7	10.3	Mean.
Group II : Smyrna	10.8	10.6	9.6	7.1	5.1	1.5	0.3	0.6	2.5	3.0	10.3	11.1	Group II : Smyrna, Sámos.
Sámos .	14	14	12	9	3	3	0.5	1.2	1	6	10	14	

MONEY, WEIGHTS, MEASURES, CALENDAR

MONEY

THE standard coin is the *drachmé*, which is the equivalent of the French, Belgian, and Swiss franc and the Italian lira. It is divided into 100 *leptá*. There are gold coins of 20, 10, and 5 drachmaí and silver coins of 5 and 2 drachmaí, 1 drachmé, and $\frac{1}{2}$ drachmé. There are also some 20-leptá silver pieces. The smaller coins are : nickel of 20, 10, and 5 leptá, and bronze of 10, 5, and 2 leptá and 1 leptón.

Gold is never met with in actual circulation, and the currency in values of 5 drachmaí and upwards consists of inconvertible bank-notes. Coins of 1 and 2 drachmaí and bank-notes of 5 drachmaí form the greater part of the circulation. Larger notes of 10, 25, 100, 500 drachmaí and upwards exist.

Care must be taken in regard to certain classes of coins declared to be no longer legal tender (e.g. French pieces of Louis Philippe and Greek coins of King Otto). The gold coins of most European nations are accepted, $\frac{1}{4}$ per cent. being deducted from their nominal value.

Turkish copper and nickel coins are prohibited ; Turkish gold and silver coins were temporarily recognized but have probably now been disallowed.

The par value in British money of the notes and coins generally current is as follows :

		£	s.	d.
Bank-notes :	100 drachmaí	=	3	19 4·4
	50 „	=	1	19 8·2
	20 „	=	15	10·5
	10 „	=	7	11·25
	5 „	=	3	11·62

		<i>s.</i>	<i>d.</i>
Silver coins :	2 drachmaí =	1	7
	1 drachmé =		9·5
	50 leptá =		4·75
Nickel coins :	20 „ =		1·9
Nickel or bronze coins :	10 „ =		·95
	5 „ =		·47
Bronze coins :	2 „ =		·19
	1 leptón =		·09

(For further information see Volume I, pp. 175-6.)

WEIGHTS AND MEASURES

The metric system was legally established in Greece in 1836. The general public, however, have not taken to it. Thus, while the Government uses the system in the measurement of area and distance (e.g. in the sale of Government lands or in marking the distances along national roads), the public always use the old *péche*, &c. In regard to weights and measures of capacity neither the Government nor the public use the metric system, both preferring to use the *oká* or oke.

Metric System

1 métron or péchys = 1 metre = 39·37 inches.

1 hekatostómetron or dákytylos = 1 centimetre = 0·393 inch.

1 chiliostómetron or grammé = 1 millimetre = 0·039 inch.

1 chiliómetron or stádion = 1 kilometre = 1,093·63 yards or 0·621 mile.

1 áron = 1 are (100 sq. metres) = 119·6 sq. yards.

1 royal strémma = 10 ares = 1,196 sq. yards ($\frac{1}{4}$ acre nearly).

10 royal strémmata or 1 hectáron = 1 hectare = 2·47 acres.

1,000 grammária (1 lítra or 1 chiliógrammon) = 1 kilogram = 2·2 lb.

1 lítra = 1 litre = 1·76 pint.

1 kotýle = 1 decilitre = 0·176 pint.

1 koilón = 1 hectolitre = 22 gallons.

Old System

- 1 old (Constantinople) péche = 0.65 metre = 25.6 inches.
 1 builder's péche (used for land measurement) = 0.74 metre = 29.13 inches.
 1 old strémma = 1,270 sq. metres = 1,519 sq. yards ($\frac{1}{3}$ acre approximately).
 1 drámi = 3.2 grammária (grammes).
 400 drámia = 1,280 grammária = 1 oká
 44 okádes = 1 kantári (or statéras) = 123.2 lb.
 18 kantária = 1 tónnos or toneláda = 1 ton (nearly)
 1 botsá = 2 okádes.
 9 drámia = 1 oz. av. (nearly).
 141 drámia = 1 lb.
 312.5 drámia = 1 kilogram.
 1 oká = 1.28 kilogram = $44\frac{1}{2}$ oz. (2.8 lb.).
 40 okádes = 1 cwt.
 800 okádes = 1,000 kilograms = 1 ton (approximately).
 300 drámia (capacity) = 1 lítra = $\frac{3}{4}$ oká.
 1 oká (capacity) = 1.33 litre = 2.35 pints.
 3.4 okádes = 4.52 litres = 1 gallon.

The Greek barrel (*varéla*), used especially for measuring wine and olive-oil, has varying weights. In the Aegean islands it equals 18 okádes.

CALENDAR

Like the Russians and Serbians the Greeks still use the Julian calendar, so that their time is thirteen days behind that of western Europe. Thus January 1 in Greece is January 14 in England.

The time used in Greece is Russian time, i.e. 2 hours fast of Greenwich.

GLOSSARY

alyké = salt-pans
áno, apáno = upper
ánti = opposite
áspro = white
chóra = the town (used of the capitals of islands)
chóri, chorió = place
éremo = desert ; barren
éxo = outer
hágios (masc.), *hágia* (fem.) = saint
hypsiló = lofty
kakó, kaké = evil ; bad
kalývia = huts ; hamlet
kámpo = plain
kástro, kastrí = fortress (often used of any site with fortifications ancient or modern)
káto = lower
kepháli, kephaló = head
kókkino = red
krýo = cold
lefkó, lefké = white
liména, limióna = harbour ; haven
livádi = meadow
loutrá = baths
makró = long
mávro = black
méga, megálo = great
méros, mére, meriá = part ; district

metóchi = branch farm belonging to a monastery
mikró, mikrá = little
mýlos = mill
néo, néa = new
néri, neró = water
nési = isle ; islet
nesiá = group of islets
óros = mountain
palió, paliá = old
Panagiá = Our Lady
pétra = rock
platý = broad
pólis = town
potámo, potámi = river
-poulo, -poula (suffix) = little ; miniature
psiló = *hypsiló*
pýrgo = tower
ráche = mountain-ridge
révma = stream
skála (Italian) = port, landing-place, or stairs
stavrós = cross
stenó, stené = pass or strait
tegáni = frying-pan
touzla (Turkish) = *alyké*
vasilikó = royal
vathý = deep
vounó, vouni = mountain
vrýsi = spring
xéro, xeriás = dry

APPENDIX

THE following information came too late for incorporation in the text. It is from a Greek source.

MYTILÉNE

PAGE 89.—The *nomós* of Lésvos was divided (1918) for administrative purposes into 2 (urban) demes (Mytiléne and Plomári) and 94 *koinótetes* (communities). There are over 100 schools in the island with 12,500 pupils. Higher-grade schools exist in the capital and in Potamós and Hagiásos.

PAGE 95.—Of the olive crop about 2,500 tons are required for home use, giving a consumption of roughly 40 lb. per head. The fruit and vegetable crop consists mainly of: table-fruits (£6,000); raisins (sultanas) (£6,000–£7,000); wine grapes (especially in Kalloné and Eresós) 1,250 tons; figs (Kalloné, Eresós, Pétra) (£4,000–£5,000). The tobacco crop is estimated at about 366,000 *koilá* (see p. 188) and is grown mostly in the Mólyvos district. The profits of the (Greek Government) tobacco monopoly are about £20,000 per annum.

The sheep and goats are estimated to yield a profit of 8s. per head per annum.

The olive-oil mills (about 180 in number) of the island deal with an average annual quantity of 60,000–64,000 tons of olives valued at £440,000. They produce some 15,000 tons of oil. In addition the olive-cake (pressings) amounts to 25,000 tons (£24,000). Further olive-kernel oil (6 mills) is produced to the quantity of 20,000–24,000 tons (£40,000–£60,000). The total value of the products of the olive-oil industry is thus £120,000–£140,000 per annum, and of the machinery employed, about £21,500.

PAGE 96.—There are some 60 soap-factories, including 8 steam- and 5 oil-driven works. They consume about

6,400 tons of olive-oil besides chemicals. The annual value of the soap produced is put at £450,000, and of the machinery engaged, £8,000.

The tanneries treat some 150,000 hides (mostly small) yearly and produce 440 tons of dressed leather valued at £60,000.

Among home industries is the weaving of bags, &c., from goats' hair and cotton at Hagiásos and Polychnítos. These bags are exported to Crete and Asia Minor.

PAGE 97.—At Pérama and Potamós are mills (2 oil-, 3 water-driven, besides 5 others) for grinding Icelandic spar. The output amounts to about 7,000 tons annually valued at £10,000. At Mystegná is a quarry for millstones. A little lignite occurs in the island.

PAGE 101.—In the capital (Mytiléne) there are : a court of first instance besides minor courts ; four newspapers ; branches of the following banks : Bank of Athens, Anatolé, Imperial Ottoman Bank.

PAGE 103.—Besides the post and telegraph offices (P.T.O.) mentioned in the text these exist also at Vrysiá, Telónia, Hágia Paraskevé. There are post offices (P.O.) also at Hagiásos, Pérama, Parákoila, Phília, Anemótia, Skalochóri, Vatoúsa, Mesótopos, Plagiá, Stýpsis, Hypselométopon, Mystegná.

Chíos

PAGE 119.—The *nomós* was divided (1918) for administrative purposes into 1 (urban) deme (the capital and suburbs) and 50 *koinótetes*. There are over 100 schools in the island, and in the capital is a high (including a technical) school for 3,000 pupils male and female.

PAGE 125.—The annual exports of dressed leather sometimes fall in value below £100,000. The annual imports of raw hides have at times reached £120,000 in value.

PAGE 128.—In the capital (Chíos) there are : 4 good hotels ; a museum ; a theatre ; two newspapers ; and branches of

the Bank of Athens, of the Ionian and of the Emboriké (Commercial) Bank.

PAGE 131.—There is telephonic communication within the capital (Chíos) and between it and most of the important villages.

There are 80 miles of track in the island ; the average width of track is 16 ft., but in nearly all parts except in the vicinity of the capital the gradients prohibit wheeled traffic.

SÁMOS

PAGE 151.—Nearly $\frac{1}{3}$ of the island is under cultivation.

PAGE 153.—There are over 100 factories in the island, many of them worked by steam- or oil-driven machinery.

PAGE 155.—A little emery has been mined recently in Sámos, but it is of inferior quality.

PAGE 159.—The capital (Vathý) has a library, theatre, newspaper, and branches of the following banks : Athens, Anatolé, Crédit Lyonnais, Imperial Ottoman, and a German bank.

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